

# **Self Insurance in the Offshore Drilling Industry. The aftermath of the Macondo.**



University of Oslo

Faculty of Law

Candidate name: Lyndsay Rebeca Garnica González

Supervisor: Ivar Alvik

Submission deadline: 14.11.2011

Word count: 17,656

*“The BP loss is yet to be understood. It is not going to be anything like as big as it could have been (referring to BP being self insured) but is going to rewrite history in terms of what liability coverage actually means and who is going to respond to it. The market hasn’t really factored in that we already have something in the market today that is life changing. From that life changing event there are going to be enormous opportunities to make money but also enormous opportunities to loss money as well. The real issue though is not about the sector price increasing, it is that life has changed and because life has changed we have to work out how the product needs to change. If the product is wrong you are going to lose money whatever price you charge”<sup>1</sup>*

Stephen Catlin.

*“To be allowed to drill on the outer continental shelf is a privilege to be earned, not a private right to be exercised.”*

Deep Water Report to the President of the  
United States of North America.

---

<sup>1</sup> Stephen Catlin, Vhief Executive of catlin Group. Energy and Marine Insurance Newsletter October 2010. Lloyd & Partners Limited. Pp. 6

## **Disclaimer:**

This document was prepared in order to obtain the grade of Master of Laws in Maritime Law granted by the Nordisk Institutt For Sjørett (Universitetet I Oslo). Reference herein made to any specific company, association, process or trademark are solely used as examples and are used merely for academical purposes. The opinions of third parties herein expressed do not necessarily represent the writers' opinions.

Materials used in this paper are in public domain except as noted respectively. When using material of this paper please credit to this document as well as the sources and materials herein indicated.

This thesis contains links to many websites, please refer to the licensing restrictions of said. The writer of this thesis takes no responsibility over the accuracy or accessibility of the materials listed on the linked websites.

**Acknowledgements:**

A mis padres Gabriel y Rebeca, y mis hermanos Myriam, Samantha y Gabriel por su apoyo, amor y comprensión, sin el cual, no sería lo que soy hoy, ni estaría entregando esta tesis.

To Messrs Manuel Garcia Pimentel and Arturo Pelayo, for introducing me and guiding me through the wonderful and fascinating world of insurance.

Jeg takker min veileder for masteroppgaven, som har hjulpet meg, hatt tålmodighet og gjort mulig denne oppgaven.

## Contents

<b>Thesis outline and the problem.....</b>	<b>6</b>
<b>Preamble.....</b>	<b>8</b>
<b>Background.....</b>	<b>10</b>
<b>Chapter 1. Marine Energy Insurance and legal insurance minimum requirements for gas and oil exploration. ....</b>	<b>14</b>
1. Insurance Contract.....	14
1.2 Insurance requirements imposed by law to oil well licensees. ....	15
1.3 The Norwegian Law.....	16
1.4 Drilling financial responsibility requirements to cover liability under American Law:.....	16
1.5 The contract: .....	17
1.6 Compulsory Insurance: .....	18
1.7 Other requirements (after the Macondo): .....	18
1.8 Differences between Norwegian and American petroleum regulatory scheme> .....	19
1.9 Offshore exploration.....	19
1.10 Industry Best Practices examples and how can they reduce failure: .....	21
1.11 The challenge of marine energy insurers.....	22
1.11.1 Marine Energy Insurance Market.....	24
1.11.2. Marine Insurance and Marine Energy Insurance. ....	24
1.11.3 Offshore Energy Insurance Common Coverages.....	26
<b>Chapter 2 Self Insurance in the form of Captive Insurance Companies. ....</b>	<b>29</b>
2.1 History and development of Self insurance in the figure of captive insurance. ....	29
2.2. Uses of Captive companies .....	31
2.3 Self Insurance and the Petroleum Companies. ....	32
2.4 Problems or advantages of the captive insurances. ....	33
2.5Insurance and safety issues .....	34
2.6 The self Insurance risks and the use of private insurance companies as a safety control measure.....	36
2.7 The oil companies view regarding modifications of the legal insurance requirements for offshore drilling.....	41

<b>Chapter 3 The Macondo. or “The well from hell”</b> .....	<b>43</b>
<b>3.1 Allocation of liability in the offshore drilling joint venture (contract of risk or drilling contract).</b> .....	<b>43</b>
<b>3.2 The parties Involved in the Macondo blow-out.</b> .....	<b>44</b>
<b>3.3 The Macondo well Blow out timeline.</b> .....	<b>45</b>
<b>3.4.The legal liability</b> .....	<b>46</b>
<b>3.5 The impact of the self insurance in the handling of the Macondo Legal liability.</b> .....	<b>48</b>
<b>1. The lawsuits:</b> .....	<b>48</b>
<b>a. The Insurance side effect. (Marin, Energy, oil and gas)</b> .....	<b>50</b>
<b>b. The legislation: (Liability Cap)</b> .....	<b>51</b>
<b>3.6 Current situation of the BP insurance coverage claims or the self insurance v. Traditional insurance Battle</b> .....	<b>52</b>
<b>4. Conclusion</b> .....	<b>54</b>
<b>Bibliography.</b> .....	<b>57</b>

## **Thesis outline and the problem.**

This thesis will discuss the insurance problems raised by the self insurance of the offshore drilling companies, specifically on the fashion of ‘captive’ company. Nonetheless, it is not my intention to address every single problem exhaustively; my intention is to explain the problems, and what I consider possible solutions to the unsafe practices that are common to the offshore oil industry mainly outside Norway and United Kingdom. I will try to address a preventive method instead of a corrective method as most jurisdictions beside Norway and United Kingdom does.

I also will seek to address the insurance figure (or strategies developed by them) as a solution to the self insurance haziness.

I have the firm conviction that no legal modification alone will be enough to prevent or reduce a future blow-out, it is necessary to engage on the supervision of the activities, and ensure the best practices are actually followed. In order to achieve this I will –mix and mingle- the law, the private insurance practices (marine survey warranty) and the best practice (quality assurance) to obtain a product that might help reduce these problems.

In some way, the oil industry is like a small kid, countries like Norway have created a performance based regime where this children learned to take care of themselves and have freedom of acting without the need of a grown up telling them how to do things properly. Nonetheless, also within Norwegian companies we can see the failure of the system on a reduced scale. When a kid is unable to do things as they are expected to, the best solution is to provide supervision, in paper this supervision should be provided by the governments but due to the big amount of projects and reduced personal this rarely happens. That’s why I propose an alternative system where the company is compelled to obtain third party supervision. Specially in the case of being self insured.

Self insurance in the form of captive company can be an easy way to avoid certain regulations and external supervision. In other words, a captive insurance is a way to comply with the legal insurance requirements but also count with diverse escape clauses tailored by the policyholder, in this case the parent company, as for example, avoidance of payment due to bankruptcy.

Introducing a regulation making commercial insurance compulsory for oil and gas exploration and exploitation in principle can appear as an excellent way to provide extra supervision to the drillings, and also raise the safety standards of the industry. These benefits have been proven in some extent by other industries like the case of the aviation insurance where commercial insurance has been made compulsory in most jurisdictions banning any aircraft without proper placed commercial insurance from their air space. However, try to apply this to the offshore drilling, has its weak side. In this regard the insurance companies declared their unavailability to provide insurance as proposed.

Another possible solution that has been explored by legislators of various jurisdictions is the raise of liability cap, which in practice, according with the insurance market will also be impossible to be insured commercially due to the limited financial capacity leading to more companies turning to the captive companies.

**Chapter one** provides an overview of the insurance, marine insurance, marine energy insurance and relevant law.

**Chapter two** outlines the self insurance on the figure of captive company and the implications it has on the safety of the operations, also the United States proposals in order to motivate the oil industry to better practices.

**Chapter three** describes the relevance of the Macondo, the legal consequences mainly involved the insurers battle against BP. We will also see that the disaster was not only caused by a succession of aberrant decisions made by all the companies involved in the drilling, but also a failure from the American government to provide effective regulations and supervision of offshore drilling. I will try to explain why if a proper regulation had been enacted, and the players were supervised or complied with all the best practices strictly, the Macondo blow out most likely would have been avoided or less devastating.

**Conclusion:** an analysis of possible solutions in order to guarantee the offshore oil industry best practices are applied.



## Preamble

With the world oil demand rising and the current oil reserves declining, the oil industry has been forced to look for new reserves in deepwater and Arctic waters; these are inhospitable and difficult to operate. As a consequence many jurisdictions are seeking ways to provide a safer drilling environment and assure that in case of oil spill the liable party will be able to cover for damages.

As we advance through this paper, we will discuss how the USA legislative bodies consider that the best way to provide a safer industry is by rising the liability cap, this, being challenged by the academy and commercial insurance market which main arguments against the raising of liability are, that the proposed liability will only reduce the safety. The oil industries will be left without supervision 'the facto' since the major companies that are financially capable will turn into captive companies as no commercial insurer will be able to provide enough coverage. This will also take the small drillers out of market. Many scholars on the other hand, consider that the best way of providing a safer environment is by making the commercial insurance a compulsory insurance system, hence having the insurance companies supervising the oil industry, this is the possible solution studied by the European Commission, nonetheless, this has not been very welcomed by the European insurance companies.

This paper will focus on the legal alternatives I consider can be a solution to the lack of compliance of the safety best practices within the offshore drilling operators. This challenge is currently under lobbying mainly in the United States and Europe<sup>2</sup>-, in order to come with a legal frame that can provide a real solution. These challenges have been difficult to solve due to their unstable nature, and even though they have been always there, after the Macondo oil spill, it has become public and evident that the current legislations are not able to provide the safety structure to cover the potential damages that the companies can cause. In the case of BP we can see clearly that this excess of damages over their liability cap were paid as a commercial strategy in order to diminish reputation consequences, that is to say, as a commercial strategy and not as a consequence of their legal liability, which if wanted, seems likely to be avoided.

Here the question raises regarding what would have happened if the incident have been caused by a company that had no economical power to face these damages,

---

<sup>2</sup> countries like Norway have implemented a system that seems more appropriated.

the reality is that under American law, and being said self-insured they would have been able to declare the company in bankruptcy and therefore not capable of complying with any damage claim. This legal disposition has been one of the main reasons to seek a reform in the legislation in order to insure the financial responsibility of the oil players.

It is difficult at this stage to address which is the best answer, since, it's too early in the process to figure out the repercussions or side effects of each decision, and most of the issues that are discussed, have no proper definition, as for example, the figure of 'captive company' that, as will be discussed further, has no proper legal definition that can be considered as accurate or universal.

## **Background**

Since the very beginning of the insurance, certain risks have been by its own nature difficult or impossible to insure. The marine perils have always produced certain skepticism within the commercial insurance companies. That skepticism, among other consequences has brought to life companies like the P&I clubs, mutuality companies which sole purpose is to cover the risks that no commercial or traditional insurance company is willing to insure.

Historically, certain risks have been proven to be so complex that placing an insurance cover results complicated, the insurance premium being extremely high (sometimes as high as the possible loss cost) or the traditional insurance providers are not willing to provide the coverage. The risks related to the offshore drilling fall within this problem.

The marine energy insurance has been in the market for several years; nonetheless, considering the difficulties that the risk management of this sector creates, the reiterated rejection of traditional insurance companies to insure, and that at some point an insurance placed on a traditional insurance company can be seen by the drilling operators as an obstacle on the freedom of decision making, therefore many offshore drilling companies have decided to create their own insurance company, which is commonly called self insurance or captive insurance. This company can also be used as a reinsurance company being the insurance merely a 'fronting'. The fronting is normally used in jurisdictions that require compulsory private insurance or the use of a local insurance company to place the insurance. Most jurisdictions do not legislate regarding the placement of reinsurance and how this should be performed considering the insurer will be the principal responsible.

Through the use of this captive insurance company which purpose is to insure its parent company the parent company obtains many benefits that a traditional insurance would not be able to provide, for example a reduced prima and tax benefits, furthermore, they do not have to go through any kind of supervision to comply with special terms or warranties contained in a insurance contract as for example the called Marine survey warranty.

Companies are prone to take risky operations if they are profitable despite being aware of potential disasters. The companies balance the potential profit against the potential risk and economical cost of covering the liability they can incur in order to decide to proceed with the realization of said risky activity. This is known as risk management or risk assessment, and, this assessment, in most cases, shows that the economical benefit tends to be inversely proportional to the risk taken. Most insurance companies do not agree with the oil companies' way of assessing the risk, therefore they establish high premiums to insure the drilling operations, and also require the compliance of diverse surveying requisites to ensure the correct operation of the insured.

One of the requisites is the so called marine survey warranty, present in most of the marine energy insurance contracts, this is a warranty where the insurer requests that a specialist surveyor reviews all the insured's operations that may be of interest for the insurer in order to certify that the company is operating safely and according to the national and international regulations and industry standards.

Said warranty can be seen as an obstacle and therefore, a ground to seek self insurance coverage, where the only supervision will fall within their own company.<sup>3</sup>

This way of insuring has been -permitted- in most jurisdictions, where companies have found the sufficient legal arguments (or legal gaps) in order to -cut corners- and create captive companies to self insure their risks.

The creation of captive companies (self insurance) has been a solution for many companies to comply with the insurance requisites in most jurisdictions, nonetheless, is only after big disasters like the Macondo blow out in the Gulf of Mexico that we are able to see through the disadvantages that this type of insurance can lead to.

After one year and some months of the incident diverse jurisdictions worldwide are struggling with the creation of new legislation that can help to prevent or diminish the possibility of another major blow out, and, if occurred, guarantee to some extent the payment of damages.

A big insurance problem that has been evident after the Macondo Blow out, is that having a captive insurance company, which is as flexible as the parent company requires, creates uncertainty in the safety standards of the company insured. An

---

<sup>3</sup> The host state where the drilling is produced will have diverse surveying's in papers where they are supposed to perform visits and other type of safety revisions that in practice, due to the high amount of work in many cases are not properly performed.

illustration of the previous, is that the policy holder is not required to comply with the marine survey warranty performed by an authorized 3<sup>rd</sup> party. This is required by commercial insurers in order to certify the company operates according with all rulings and safety protocols. Other problem that leads to safety uncertainty is the fact that the offshore company can also register their vessels (including the Mobil Offshore Drilling Unit or MODU's) in any flag of convenience, that, in principle, most insurance companies will not allow or will rise the premium up in order to allow the flag. These flags of convenience tend to have lower safety standards, than recommended flags as for example the Norwegian, British or American flag, the flag of convenience also tend to have low or no supervision on their flagged vessels.<sup>4</sup>

This leads to a very difficult challenge for the legislators and the insurance companies worldwide, since, if the American proposal is adopted and the liability cap is raised, the insurers will not be able to provide coverage, but if the legislators decide to make the commercial insurance compulsory as the European Commission suggested, the insurers will not be able to provide coverage either.

As it will be explained further, seems likely that any of this solution, will end up in the placing of a policy obtained from a commercial insurance, merely as a fronting from a captive insurance.

The relationship between a captive insurance company and the commercial insurance companies in the manner of fronting, is not something new to the industry and has been developing and growing in one way or the other during the past years. This is a commercial way for the insurers to grow their portfolio and avoid risking their own assets. Since, the insured places insurance on a commercial insurance company which will reinsure the covered risk with a captive company belonging to the insured party.

This and many other common insurance practices in the offshore industry became more evident after the Macondo incident, when it was easy to see the –possible– short cuts taken by BP through its captive insurance Jupiter. In the case of Jupiter we can see that BP did not only obtained Tax benefits, also they were able to operate with drilling platforms registered in Flags of convenience. In this case, the company

---

<sup>4</sup> An example of this can be found in the case of the Disney Dream cruise ship, with Bahamian Flag. The vessel was arrested at the coast of Mexico after a crew member reported disappeared in high seas. The vessel search had to be taken over and released by the Mexican authority due to the Bahamian police unavailability to send personnel to take over the problem. These being the case of an American flagged vessel would have been taken over the American authority.

Transocean, registered their Mobile offshore drilling unit 'Deep Horizon' in the Marshall Islands. Other advantage of being insured through its captive Jupiter, is, as abovementioned, that they don't have to comply with the marine survey warranty, a contractual obligation which non compliance in jurisdictions like the UK would nullified the insurance policy. Through this warranty, the insurance company obliges the insured to be supervised and reviewed on all their procedures and operations by a marine surveyor approved by the insurance company. The oil companies, by having an insurance placed through a captive company, in practice, get rid of any kind of external supervision, including to some extent the supervision of host countries where the drilling takes place<sup>5</sup>, they also avoid most of the safety rules imposed by the countries since they are ruled in most of their operations by the flag of the vessel (drilling unit in this case<sup>6</sup>) and not by the host country.

Seems likely that permitting that the legislation is modified and the liability on insurance is raised, the private marine energy insurance market has no capability of covering those exposures, therefore the small petroleum exploration companies that rely solely on private insurance will be impeded to continuing the drilling and traditional insurance companies will not be able to remain in the market.

In order to be able to understand this conflict better, and the challenges of the insurers and the legislative bodies, we first need to understand the marine energy insurance, the Macondo incident and the role of the self insurance through a captive company and its structure.

---

<sup>5</sup> There are many safety protocols established by the local legislations that must be complied with.

<sup>6</sup> Why a drilling unit can be registered in a FAC will be dealt further in the text.

## **Chapter 1. Marine Energy Insurance and legal insurance minimum requirements for gas and oil exploration.**

### **1. Insurance Contract.**

An insurance contract is a transfer of risk from the insured to the insurer.

For some insurance lawyers specialized on high risk exposures, an insurance contract can be also considered as a ‘share of risk’<sup>7</sup> since part of the risk is retained by the policy holder, or it is spread through diverse co-insurers due to the high financial exposure. The same applies for the reinsurance where part of the insurance can be or not retained to some extent by the insurer and placed in one or many reinsurers.

Despite the fact that there are no insurance international agreements<sup>8</sup>, due to the international nature of major insurance risks as marine, aviation and offshore oil and energy, there are certain similarities in the conditions offered in the insurance market.<sup>9</sup> Considering that most insurance policies are placed or must be placed through local insurance companies these insurance companies tend to acquire re-insurance either in part or by the full amount insured within major reinsurers located mainly in the London or Bermuda market, therefore most insurance companies try to standardize their clauses to the common clauses of the market they will try to place their reinsurance. This, is what is called in practice follow the claim, since, in most cases, despite the insurer has full liability in front the insured party, normally, there will be some risk allocation through co-insurance or reinsurance. Even though in theory the insurance company is in charge of handling the claim, in practice it will be the reinsurance claim leader team who will be in charge of handling said, being the reinsurers who take the final decisions, analyze the sue and labor<sup>10</sup> and realize the payments. Thus, being the reinsurers facing the biggest share of the risk, it’s to be expected that they look forward to re-insure according to their own clauses.<sup>11</sup> This practice is commonly known as back to back insurance-reinsurance policy. These back to back practices have to be carefully followed by the brokers placing the reinsurance in order to avoid problems in case a

---

<sup>7</sup> Mr. Manuel Garcia Pimentel Caraza. Esq. President of the legal committee of Swiss Re Mexico.

<sup>8</sup> There are recommendations in certain areas as for example in Aviation Insurance given by ICAO (International Civil Organization) nonetheless these are just recommendations.

<sup>9</sup> There has been some attempts to standardize the insurance contracts, as an example we have the UNCTAD Standard Clauses for Hull and cargo insurance published in 1983.

<sup>10</sup> Duty to notify and avert and or minimize the loss.

<sup>11</sup> This can be overruled depending on the jurisdiction where the claim / risk occurs. ( Forum Shopping, Forum Convenience and choice of law)

claim affecting the insurance policy is raised and they expect to recover from their reinsurance policy.

Important international legislations ruling the marine insurance are the UK Marine Insurance Act 1906, and the Norwegian Marine Insurance Plan of 1996. In both cases, most of the rules are not mandatory and may or may not be modified by the insurance contract unless otherwise stated.

## **1.2 Insurance requirements imposed by law to oil well licensees.**

First of all, it is important to address the fact that the two systems I will address are completely different. My intention is to use the Norwegian legislation as an example of a more mature legislation. Some small referral to English law will be present.

The Norwegian kingdom faced mainly two big accidents that led to their current legislation, the Piper Alpha and the Alexander Kielland, the response to the second was a total drift within the industry operations. Under the new legislation the Norwegian government requested the prospect operator to prove they were thoughtful with regard all the possible risks of the operations. Under this system now the licensee is not “approved” to operate but “consented” to operate as long as they could demonstrate they possess sufficient readiness and safety to operate.

The Piper Alpha blow out investigation under Lord Cullen supervision ended up enacting a similar legislation in the United Kingdom, where the prospected licensee had the burden of proving they had in place a proper risk management and safety systems to address the potential risks. This assessment is called by the United Kingdom “Safety Case”.

Regarding the United States approach, during 1989 the Marine Board of the National Research Council made recommendations for overhauling MMS’s regulations, among other changes they proposed recurrent and extensive inspections of drilling facilities. A few months after this, the Exxon Valdez ran aground leading the attention to the oil pollution and setting a blanket over the changes proposed, therefore, instead of the proposed ruling, the congress enacted the Oil Pollution Act of 1990. This act fails to incorporate any of the changes proposed by the marine commission.

The MM’s keeps trying to convince the congress to enact a regulation that compels the drilling lessees and/or operators to establish “a safety and environmental



management program (SEMP)", comparable to the United Kingdom's Safety Assessment or the Norwegian Safety Evaluation programs. These act, should also channel the responsibility of planning and guarantying the proper operation of the licensee and operators. The Marine board argues that this enactment will improve the safety and environmental defense. The proposed reform stayed just as a proposal as to day -20 years after it was originally proposed-. Even after the Macondo blow out, seems there are diverse political interests blocking the passing of said reform, since the appointees is never over .80 thus, this act containing rulings similar to embraced by other countries decades ago has been rejected several times. As a response to the pressures of the maritime board, the congress requested the operators to embrace voluntary safety and environmental management.

### **1.3 The Norwegian Law.**

There are several laws and regulations of relevance but for practical purposes I will refer to the Norwegian Marine Insurance Plan of 1996 version 2010 Chapter 18 regarding the insurance of offshore structures which is applicable to all MODU's and the Act 29 November 1996<sup>12</sup> No. 72 in relation to petroleum activities which frames the operations and supplementary regulations. Of special interest is the §10-7 Security which provides the possibility of the Ministry to request a security in order to guarantee the obligations of the Licensee and any liability they can incur as consequences of their operations (see also chapter 5).

### **1.4 Drilling financial responsibility requirements to cover liability under American Law:**

Addressing this issue under American law it's a difficult matter considering each state has their own legislation, nonetheless I will try to address only the federal requirements. The offshore oil and gas rights are owned either by federal government or leased to private companies for development. These being the greatest difference within offshore and inland drilling, were the well belongs to the owner of the land and not to the federal government.

---

<sup>12</sup> [http://www.npd.no/en/Regulations/Acts/Petroleum-activities-act/#Section 7-2](http://www.npd.no/en/Regulations/Acts/Petroleum-activities-act/#Section%207-2)

## 1.5 The contract:

First we have to appoint that under most jurisdictions within the United States, the risk allocation can be spread contractually on the offshore drilling contract, hence, in principle, considering the contract has been drafted unambiguously the liability and indemnity terms in the contract should be enforceable. Nonetheless, we have Texas and Louisiana anti-indemnity statutes see **TEX. CIV. PRAC. & REM. CODE ANN Sections 127.00 1, et.seq.; LA.REV. STAT.ANN. § 9:2780. (Wyoming and New Mexico have similar statutes)**. Here is established the unenforceability of the risk allocation provisions of a drilling contract in case of there is a lack of mutual indemnities, insurance or negligence. Therefore in this matter will all depend on the governing law chosen in the contract.

It is general practice in the MODU's operation contracts to appoint the governing law according to the ocean continental shelf where they will be deployed, general maritime law of the United States in this case.

On the other hand we have the Insurance Provisions which specifies the coverages the contractor is compelled to maintain, typically worker's compensation, employer's liability, comprehensive general liability, property coverage, excess liability coverage and Hull and Machinery and protection and Indemnity. These are usually specified in the contract.

A problem raised from this contractual insurance provisions, is that many operators have the feeling that, since the cost of insurance is included in the contractors rates, this insurance should benefit them fully in case of being necessary. On the other hand, according most contractors, (and also according to most Insurance companies) this insurance coverage is only for the purpose of supporting contractual liability and indemnities; nonetheless, in most cases due to previous agreement, the operator can be covered as additional insured (unqualified additional insured, this does not apply for workers compensations), due to the increased rate of claims, this result in a more expensive insurance premium to the contractor. Another complication of this 'additional insured' figure is that can override many liability and indemnity contractual provisions, and make problematic the appliance of the contractual risk allocation, specifically when there is a lack of 'insurance policy limits' wording on the contract (use of talismanic wording).

Another important issue here is the waiver of subrogation; unluckily this is a topic that can be matter of a thesis of its own therefore will not be addressed in this paper.

Usually the contractor is required to present certificates of insurance, which normally should have a clause addressing the fact that these can't be cancelled or modified without previous notice to the operator.

### **1.6 Compulsory Insurance:**

The current insurance requirements for offshore facilities (under revision) contained in the Oil Pollution Act of 1990 mandate the demonstration of financial responsibility, however, this is limited to USD\$75million per incident per offshore facility for liability for economic and natural resources damages.

Oil Spill Financial Responsibility (OSFR) guidelines oblige the leaseholders of rigs in the outer continental shelf to prove a minimum financial responsibility of 35,000 barrels, and up to USD150million, considered the 'worst spill case scenario. These can be demonstrated through surety bonds, guarantees, letters of credit, private / traditional insurance, and in the case of major oil companies, it is common to place a self insurance (insurance through a captive company).

### **1.7 Other requirements (after the Macondo):**

The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) in charge of regulating offshore drilling activities in order to grant a permit require that the company can prove they count with enough oil spill containment equipment to respond to a worst- case scenario. After the Macondo, This entity is also in charge of performing periodical surveys to the facilities. There is also a strengthens on the equipment standards such as blow up preventers.

The previous actions taken by the BOEMRE have not been welcomed within the industry, now its expected also that the same BOEMRE will force the companies to certify that their operations comply with the new standars which according to the CEO of Noble corporation, David Williams will increase their drilling time in 25% and it cost

will be up to USD\$183 million per year. Increasing the cost of each well at least USD\$1.4 million.

### **1.8 Differences between Norwegian and American petroleum regulatory scheme>**

Norwegian regulations are safety case based (performance based) and provide some prescriptive requirements only as a supplement. The safety standards that the companies must comply with are defined in the regulations. Therefore the companies can decide how to comply with the requirements with solutions *ad hoc* to their own risks. Said regulations are risk based where the requirements will depend on the particular risk of each player. And the operators are fully responsible of complying with the operational safety process according to the regulations.

On the other hand, US regulations are prescriptive, the laws and regulations define the structures, equipment, and technical operations that are minimum required to minimize hazards, there is no real requirement to identify their own risks. And furthermore, the compliance responsibility of all the safety procedures is divided within the operator and authorities.

The applicability of this ‘safety case’ (similar to the adopted by the UK and Norway) is under study by the Obama administration, nonetheless, these was also proposed in 1979, and frozen in time since it never passed the congress.

### **1.9 Offshore exploration**

Offshore oil and gas exploration is a complex and expensive industry; it requires a high investment, and due to its very own nature, implies higher risks than onshore drilling. As a consequence, usually only large corporations can take over the process; nonetheless, due to costs and sovereignty reasons, the oil-exploitation often it’s undertaken by the Government that owns the oil-gas reserve.

When the projects are taken by a private owned company, it is common that the same operates in what is known as a joint venture (contracts of risk or share the risk contract) in order to allocate the risk and make their exposure less volatile.

The offshore drilling does not merely imply an economic and technological challenge; it can also be disastrous for the ecology, thus, making this a controversial activity. Said debate has led to diverse legal and political discussions within the governments that possess offshore oil reserves. As an evident example of this, we can appoint that some states in the United States of America have decided to ban this activity; (including Alabama, California and Florida).<sup>13</sup> Nonetheless, The United States Executive Prohibition of Federal Offshore Oil and Gas Drilling was lifted during 2008 under George W. Bush regimen (Known as the 'Drill baby Drill' lifting).

The development of the offshore oil exploration (mainly on shallow waters), despite of the enormous disadvantages, has prospered for more than 122 years, provided that it has resulted to be a highly profitable industry<sup>14</sup> and the population's oil and gas necessities.

In addition, we can find an ongoing dispute in the countries that possess oil and gas reserves regarding the legislation of the offshore operations, and the improving of the safety on the same, including the opening of new areas of the continental shelf for oil and gas development, as well as the broader aperture of the Atlantic waters, Arctic coasts and poles for those countries that possess territory in the poles.

As a consequence of the recent events, legislative bodies of diverse jurisdictions have faced challenges developing an appropriated legal frame that can provide an efficient structure and guarantee the safety of the drilling preventing incidents and guaranteeing 3<sup>rd</sup> people's rights to be indemnified.

As an example of abovementioned, on August this 2011, the USA Bureau of Ocean Energy Management Enforcement and Regulation, gave a conditional approval allowing the oil company Shell to drill in the Beaufort Sea, starting early 2012,. This sea situated on the Arctic Ocean, it is located north of the Northwest Territories of the Yukon, Alaska and west Canada. Due to its peculiar location, the environment in the Beaufort Sea is known to be hostile and in addition this sea is frozen almost all year long. The opposition withstand that this goes against the promised legislative reforms after the Macondo Blowout<sup>15</sup> especially considering that mustering an emergency team will be more challenging and slow than in the Gulf of México.

---

<sup>13</sup> [www.nytimes.com/2010/03/31/science/earth/31energy.html](http://www.nytimes.com/2010/03/31/science/earth/31energy.html)

<sup>14</sup> NOIA National Ocean Industries Association. [www.noia.org](http://www.noia.org)

<sup>15</sup> [www.usatoday.com/money/industries/energy/2011-08-07-shell-arctic-drilling\\_n.htm](http://www.usatoday.com/money/industries/energy/2011-08-07-shell-arctic-drilling_n.htm)

The reality is that the current need of oil has become so great, that the tracking for new reserves of oil and gas has been enlarged. Shallow water reserves are in such low levels that the companies have been forced to move to deepwater. As a consequence offshore projects have more pressures and it is expected way more from them than in previous years. The offshore drilling projects are every day more ambitious thus, drifting the limits of technology, science and legislative bodies, therefore, also dragging the Insurance market into the deep of their risks.

Deep water drilling challenges have been compared with outer space missions due to the inhospitable conditions that these projects are taken over. These circumstances make the risk assessments difficult, inaccurate and extremely unpredictable, challenging the Insurance companies that attempt to provide an appropriated and profitable product to cover these risks. This can be easily exemplified as, insuring an offshore drilling implies the same difficulties than insuring a space shuttle.

#### **1.10 Industry Best Practices examples and how can they reduce failure:**

National Aeronautical Space Administration (NASA) one of the best examples of industry best practices, holds an impressive safety record, considering they performed hundreds of space flights during their 53 years of history. Nonetheless there is also two black moments in the NASA history: The Challenger in 1986 and the Columbia in 2003. As a result the NASA suspended their flights for almost 2 and 3 years respectively in order to reassess their safety and quality assurance in their organizational and functional operations. Risk management software were developed and improved. These software's were distributed and used within the NASA and the outside suppliers in order to guarantee all work with the same standards. Considering how the quality was assured during NASA's flights and the increased refinement of probabilistic risk assessment which identifies the risk involved in the technological systems used. For above mentioned, insuring a space mission, -despite hard to believe- can result less risky than insuring an offshore oil drilling. Even if both are exposed to inhospitable conditions, the space shuttle quality assurance is followed strictly, which is not by many of the oil operators.

In the NASA case, it's easy to see how they had the American Government and the Tax payers requesting for no less than perfect results, every mistake got the pressure

of ending with the agency life. In the case of the big oil majors, every failure, as long as results profitable on the balance sheet, is just one more failure, being that the reason why appropriated compulsory external supervision is required.

### **1.11 The challenge of marine energy insurers.**

For the insurance companies that succeed creating and introducing a - theoretically- appropriated product it has been proven that assessing their real exposure is unfeasible, since, after each major accident they realize how inaccurate their risk assessment was. On words of Rodolf Tolle, director at Lloyd's, "*current pricing levels do not reflect prevailing economic conditions and leave little margin to support catastrophic loss*"<sup>16</sup>

Examples of this are how before 2010, all the exposure rates were fixed assuming the worst scenario could be a- Piper Alpha- like blowout. The Piper Alpha incident which occurred in shallow waters had a USD\$1.4 billion insured cost and 167 lives were lost<sup>17</sup>. The Piper Alpha has been considered as a big -wakeup call- for the marine energy insurance market.

The Piper Alpha, operated by Occidental petroleum (Caledonia LTD) in the North Sea began production in 1976 as an oil platform and thereafter was converted into a gas production platform.

The Piper Alpha blow-out in 1988 was not only a complex loss materially speaking; this casualty also implied an organizational challenge for the insurers since each joint venture partner had their own insurance policy. This enlightened a lack of structure on the follow up of the underwriting realistic exposure. As a consequence of the Piper Alpha a system called 'Realistic Disaster Scenario (RSD)' was created in order to survey the -actual risk- on a more truthful picture. It is to be noted that one of the biggest challenges of the legislators and the courts is the complexity of the joint ventures which leave a lot of space for the joint venture partners to argue and debate regarding who is liable for what and therefore which insurance policy should be affected.

An interesting point on this case, is that, the Piper Alpha blow out occurred in the north sea; Scandinavian countries like Norway, due to their maritime tradition, have a more systematized approach to the maritime activities, they have a well drafted marine

---

<sup>16</sup> Lloyd's and Partners Limited, Energy and marine insurance News letter. October 2008. Pp.9

<sup>17</sup> Idem pp.27-28.

insurance legislation, including oil and gas (i.e. Marine Insurance Plan) which is more structured and severe and which is less open to interpretation than those legislations we can find in evolving countries or other type of Flag of convenience States. On this regard it's important also to remember that American legislation due to its own tradition leave great space for court interpretation. In other jurisdictions, despite the great amount of drillings performed, the oil legislations are very limited; many countries have no proper legislation in this regard or this is very broad as the case of United States of Mexico which main insurance ruling resumes in only a general insurance compilation applicable to most areas of insurance<sup>18</sup> and these code supplementary rulings. In practice this is usually not a problem considering the applicable law will be the one stated on the insurance contract therefore any insurance dispute normally will be solved in English courts, applying the country law in the possible extent.

Diverse researchers, mainly in the United Kingdom, raise doubts concerning the capacity of the offshore companies to shut off a leaking well in deep water or Arctic waters or for any matter any harsh environment like the North Sea or the North Atlantic. Furthermore, the capability of most of the response equipments to function in for example the open Atlantic has not been tested, thus, questioning if the current legislation will be enough to provide legal certainty in case a Macondo like scenario occurs in the North Sea or the Arctic.

On the other hand, the North Sea oil deposits tend to be small and shallow involving relatively small oil companies mainly in the UK production. The question raises weather if a small company can cover a big spill response and many reports comment that the liability should be raised in the UK in order to oblige the companies to obtain Insurance.<sup>19</sup>

Even though the safety management regulation and training required for the employees working offshore at the time of the Piper Alpha disaster has been modified, adjusted and straightened to what has been considered more suitable in order to lower the risk of another disaster like the Piper Alpha, and a numerous figure of measures

---

<sup>18</sup> Ley mexicana sobre el contrato de seguro, reglamento a la ley sobre el contrato de seguro, código mercanti de los Estados Unidos Mexicanos.)

<sup>19</sup> <http://ecocentric.blogs.time.com/2011/01/06/british-lawmakers-no-need-to-ban-offshore-drilling/#ixzz1X6ExLz7s>



were taken on the insurance market in order to project a more precise exposure, the offshore drilling risks proved to outrange the insurance market precautions.

Another matter that Insurance companies face on a offshore energy disaster scenario, is the situation of the different legislations that can have effect on the claims and the considerations to be taken depending the geographical area where the rig – well is located and how each jurisdiction can imply a risk in itself (i.e. Europe/North Sea; US/ Gulf of Mexico; Brazil; Russia; Australia). On this matter, the insurance companies have to deal not only with the host country legislation, also the flag of registration of the drilling rig, and the nationalities of the workers and affected parties.

#### **1.11.1 Marine Energy Insurance Market.**

Due to the very specialized nature of this activity, also known as Offshore oil and gas insurance among other names, traditional Insurance companies faced the necessity of creating a specialized section of the Marine Insurance (some experts consider it a separated area within the insurance industry) dealing specifically with the risks of this peculiar branch of marine operations.

The limits of the offshore marine Insurance are traditionally in excess of USD\$1 billion, for this reason, the insurance companies found the necessity to syndicate themselves in order to be able to cover the entire risk of exposure. The main syndicates in this area are the London and the Bermuda insurance Market.

Offshore energy Insurers were traditionally considered as naïve due to their reckless way to underwrite the risks -considering the difficulties faced by the offshore units, the perils and exposures including hurricanes and defects in plans and specifications-. The reality nowadays, is that this specialized group of Insurers have developed a very strict protocol and hired a technological team of experts that evaluate all the risks and exposures they underwrite<sup>20</sup>.

#### **1.11.2. Marine Insurance and Marine Energy Insurance.**

---

<sup>20</sup> Conning Research and Consulting Strategic Study Series, “Ocean Marine Insurance: Entering New Waters:2009”.

Every jurisdiction has special ways of separating or naming their insurance covers, although, normally, marine Insurance will be divided in dry and wet, (inland and sea/ocean respectively).

Considering the maritime market necessities, historically the maritime industry including their insurance have been placed on a very favorable legal consideration; having at some extent tailored their own legislation which results favorable to the industry, nonetheless, if this was regulated on another manner would result way too expensive to be operated. This general regulatory body is known as Admiralty law in the USA and generally referred to as Maritime law in the rest of the world.<sup>21</sup> Due to the market mobility the legal bodies and the insurance market tend to have a somewhat standardized fashion in the major markets. There is an academical debate weather if marine insurance should be considered within the scope or maritime law or not.

One of the main conflicts regarding Offshore Energy operation is how destructive their risks can be. For example, casualties like the one produced in the Gulf of Mexico by the Deepwater Horizon are difficult to analyze and survey, as it's difficult to separate all the joint venture participant responsibilities and liabilities. The Deepwater Horizone is a MODU's, that is to say, a Mobile Offshore Drilling Unit, which is considered as a vessel, therefore being subject to Maritime law and Marine Insurance. Now, the blow-out started on the well, therefore corresponding to the Marine Energy Insurance. Here there is still a debate regarding which insurance should face the loss.<sup>22</sup> “ *Procedure to determine an actual case or controversy regarding a claim by BP for additional insured coverage under certain excess liability insurance policies issued to Transocean Ltd. [...] Transocean's pollution-related liabilities to BP are set forth in Article 24.1 of the drilling contract, which provides that Transocean "shall assume full responsibility for and shall protect, release, defend, indemnify, and hold [BP] ... harmless from and against any loss, damage, expense, claim, fine, penalty, demand, or liability for pollution or contamination, including control and removal thereof, originating above the surface of the land or water from spills, leaks[...]* PRAYER The Transocean Excess Insurers pray for declaratory judgment in their favor confirming

---

<sup>21</sup> United States of America Congressional Research Service, “Deppwater Horizon Oil Spill Disaster Recovery, and Insurance Implications” Rawle O.King. / Thor Falkanger, Hans Jacob Bull, Lasse Brautaset “Scandinavian Maritime Law “

<sup>22</sup> USA Congressional Research Service. / Certain underwriters at Lloyds of London and various insurance companies versus BP et al. civil action admiralty rule 9 filed in TXSD on 05/21/10 case 4:10-cv-01823 controversy regarding coverage of BP as additional insured. / Conversation with Mr. Nicholas Medniuk from Clyde & Co Beaumont & Sons London. (Reinsurance).

*that BP is not afforded additional insured coverage in connection with BP's pollution-related liability for oil emanating from BP's well in connection with the explosion, fire and subsequent sinking of the Deep water Horizon, and further pray for all such other and further relief as equity and the justice of this cause may require and permit.”*

### **1.11.3 Offshore Energy Insurance Common Coverages.**

Specific energy insurance coverage for onshore operations was introduced by the London insurance market at the end of 1940, being limited mainly to the physical damage of the rigs. At the beginning of 1950's a 'control of well' policy is launched by the London market, and the US insurance market adopts to a certain degree the British formula.

The coverage for marine offshore operations has been typically divided as follows:

- a) Physical Damage
- b) Control of well / operator's extra expense. (Costs of gaining control of the well)
- c) Comprehensive General Liability.
- d) Environmental/ Pollution Liability. <sup>23</sup>
- e) Removal of debris /wreck.
- f) Direct and Contingent Business Interruption. (loss of production income). Claims for injury or death of employees while on duty.)
- g) Workers Compensation / Employers liability. (
- h) Offshore Supply Vessels (OSV's, MODU's, PSV, AHTV, ROV's etc).

The well control, being the oldest one of this type of coverage, dates from early 1940's. Physical Damage, has been in the London Insurance market since late 1960's, when the need of covering direct physical loss or damage to platforms, rigs and equipment became necessary. <sup>24</sup>

Typically we will find three basic operational physical damage wordings in the market:

---

<sup>23</sup> The rationale behind this imposed liability is to give the Offshore companies-expensive- reason to assess their risks and take measures to reduce accidents. This also places the Insurance industry expertise risk analysis in the game.

<sup>24</sup> David W. Sharp , Offshore Oil and Gas Insurance 1st ed 1994.

1) The London Standard Platform Form (LSPF): This is a Specialized Marine insurance form developed for offshore production units, where the wording is produced specifically to cover perils associated with oil and gas drilling perils, in addition of the common marine risks.

2) Institute Time clauses Hulls Port Risk: Floating production storage units and Offloading Vessels (hereinafter referred to as FPSO and FSO accordingly). These vessels which have no proper drilling capacity and at some point are merely modified tankers are commonly insured on a modified version of the Institute Time clauses Hull port Risks.

3) The pipeline Form: This insurance coverage is suitable for pipelines and other sub-sea properties which risk peculiarity lead to a specific wording, although commonly are insured under the London standard Platform Form with some exclusions.<sup>25</sup>

B) Control of Well (operator's expenses), also called blow out coverage: This insurance covers the expenses incurred by the insured after a blow out, and usually includes the following: (i) Re-drilling Expenses (bring the well to the original depth and comparable condition before the blow out), (ii) Third party injured liability, (iii) Third party property loss or damage, (iv) Clean up costs and defense as result of blow-out. (Liability for pollution), (v) Evacuation expenses, (vi) Seepage and pollution (accidental), (vii) Well firing (deliberated) (viii) Liability for damage to third party equipment under the operator's care and custody. (Custody and control).

This can be used also to cover Platform supply vessels or offshore supply vessels when chartered on bareboat. It is to be noted that the bareboat chartering of these vessels is not common, being the standard form the usage of supplytime, towcon and townhire or any other standard form provided by the big oil companies. When the vessels are chartered on the previous forms, the common way to place the insurance for the ship-owner is the traditional Hull and machinery and P & I coverage adding the wording "any additional insurance to be of charterer's account" as for example when towing rigs or Ensco's jackups.<sup>26</sup>

9) Third party insurance policies: Workers compensation employers' liability:

---

<sup>25</sup> Idem.

<sup>26</sup> Conversation held with Mr. Tomas Nilsen, Chartering Manager of Deep Sea Supply. tomas@dss.no

10) Hull insurance of mobile offshore drilling units. (MODU's). These special conditions are regulated on chapter 18 of the Norwegian Marine Insurance Plan. P & I clubs designed special rules for this vessel on a chapter known as 'P&I' cover of mobile offshore units that can be found in the Gard rules.<sup>27</sup>

The "working capacity" of the current private Insurance Market, as expressed by the vice President of Willis, leads to a Control of Well (COW) coverage usually being underwritten usually between USD\$600 million and USD\$700million per incident. This including the financial responsibility certify that usually amounts to USD\$200 million.<sup>28</sup>

---

<sup>27</sup> Gaard Rules 2011 pp.129 RulesP&I Cover of mobile offshore units.

<sup>28</sup> Testimony of Ron Baron Before the Senate Committee on Environment and Public Works.

## **Chapter 2 Self Insurance in the form of Captive Insurance Companies.**

### **2.1 History and development of Self insurance in the figure of captive insurance.**

For many, the history of the captive insurance can be placed hand by hand with the birth of the private insurance market or proper insurance as know by many, since, the origins of the captive insurance can be found with the need of the owners of certain risk to insure their assets.

Mutual Insurance can be traced as early as 1782 and commercial unions in the London area have been formed since 1860, trend that was extended to North America. By early 1920's, companies like British Petroleum, Unilever, Pilkington and Lufthansa had developed their own captive insurance company. Guernsey financial services commission declares that their first captive company was established in 1922.<sup>29</sup>

Nonetheless, the concept of captive Insurance or captive comp any can be traced as we know today to one man, 'Fred Reiss', who in the early 1950's got involved on this lucrative industry and developed the scheme as we know today.

Mr. Reiss realized the high exposure of some business and how hard was to obtain insurance or how expensive was to obtain it, mainly when dealing with fire, new buildings, oil plants and other high risk operations.

It's said that the term "Captive" refers to one of the first clients of Mr. Reiss, who owned mines in order to produce their own raw materials and called them "captive mines". After some years Mr. Reiss incorporated the American Risk Management company who assisted diverse companies in the creation of captive insurance companies.

The original purpose of said captives was to insure only their parent company, therefore, requiring a low level of capital and, since the USA and UK legislation did not distinguished between a traditional insurance company and a captive insurance the hunt to more favorable jurisdictions begun.

As a solution, Mr. Reiss decide to establish a subsidiary company in Kentucky and Ohio which sole purpose would be to insure the risk of the parent companies.

The definition of captive company specially respect insurance is debatable, there are many possible definitions, for the purpose of this thesis we will use the definition used by the International Association of Insurance Supervisors that defines a captive

---

<sup>29</sup> [www.gfsc.gg](http://www.gfsc.gg)

company as “ an insurance or reinsurance entity created an owned, directly or indirectly by one or more industrial, commercial or financial entities, the purpose of which is to provide insurance or reinsurance cover for risks of the entity or entities to which it belongs, or for providing insurance or reinsurance to other parties”<sup>30</sup>

Now, according to the EU reinsurance directive, a captive company will be “*A reinsurance undertaking owned either by a financial undertaking other than an insurance or reinsurance undertaking, or a group of insurance or reinsurance undertakings or by a non-financial undertaking, the purpose of which is to provide reinsurance cover exclusively for the risks of the undertaking or undertakings to which it belongs or of an undertaking or undertakings of the group of which the captive reinsurance undertaking is a member*”.<sup>31</sup>

On the other hand, for the Americans, a captive insurance can be defined as “*Any insurer that insures the risks of its parent or affiliated companies of its parent, any member organizations of an association and the affiliated companies of the member organizations, or any policyholders or participants that have entered into a contractual relationship with the insurer for the purchase of insurance*”<sup>32</sup>

There is a historical debate regarding the definition of Captive, or Captive insurance as Kate Westover defines in her writings<sup>33</sup>. One of the reasons why users (i.e. policyholders, captive owners), do not seek to a proper definition, is because that would require more regulation. It can be said, that, in principle, each insurance captive will insure the parent’s companies risk.

Some jurisdictions have a more mature concept of captive insurance, especially those that allow the insurance through the figure of protected cell companies, or segregated account companies.<sup>34</sup> Examples of this commonly called PCC’s are reinsurance pool were business with related business lines but different owners gather to create a common captive (not considered as pure captive by many lawyers).

---

<sup>30</sup> IAIS Enhanced Disclosure Standard.

<sup>31</sup> EU captive market represents ca 10% of the global captive market.

<sup>32</sup> Captive Insurance Council of the District of Columbia.

<sup>33</sup> “Captives and the management of Risk” IRM 2001 ISBN 1-886813-88-4

<sup>34</sup> An infinite number of entities legally separated from each other but under the same holding or parent company control.

Many companies interested in the creation of a captive discovered that the legal requirements for the formation of a captive insurance were economically unsuitable for their requirements; therefore experts looked to certain offshore jurisdictions.<sup>35</sup>

In 1976 a group of executives created a 'Rental captive' in Bermuda which focused on providing small companies with a rentable captive system sharing lawyers, bankers, actuaries, and risk managers and other specialists needed for the proper function of a captive, and therefore, avoiding the expensive creation of a captive of their own. One year after, the USA government forbidden the use of insurance placed between a parent company, this forced many captives to be considered as group of bona fide insurance companies willing to underwrite other risks, or turning the captive in a reinsurance company using a commercial insurance company as fronting to the operation.

## **2.2. Uses of Captive companies**

Captive companies are created either to insure or reinsure certain risks a parent company may have. The use of a captive as Reinsurance is done trough an operation called 'Fronting', were the risk is insured trough a commercial insurance (typically in jurisdictions were the immediate insurance trough a captive company is forbidden by law). Then, the insurance company places the risk insured with them trough the placing of a reinsurance with the captive company. This way, the ultimate risk is retained with the captive. Nonetheless, many jurisdictions, for example the Mexican and American, despite they do not forbid the use of a captive as reinsurance, they do have provisions that establish that despite acquiring reinsurance, the insurance company should be fully liable towards the policyholder<sup>36</sup>.

One of the main reasons for the Insurance companies to accept the fronting reinsurance is that many jurisdictions require that the risks are insured in a company established on the country were the risk might occur. Thus when the policy holder possesses risks that the insurer consider high, the only way they agree to insure is by having a reinsurance policy on place. This way the risk ceded ends up under the captive portfolio. This practice also allows the insurance companies to grow their premiums and consolidate commercial relationships.

---

<sup>35</sup> Principal jurisdictions that enacted favorable captive insurance legislation as follows: Bermuda (1978), Cayman Islands (1979), Vermont (1981), Isle of Man (1986) and Guernsey (1986).

<sup>36</sup> § 18 Ley Sobre el contrato de Seguro. Estados Unidos Mexicanos.



## 2.3 Self Insurance and the Petroleum Companies.

Traditionally, most oil companies, and their contractors, have insured themselves as a way of reducing their exposure. Unluckily, is only after a big casualty that they come to know the deficiencies and limitations of their coverage. Some of the inherent hazards that the offshore drilling industry faces are the shortage of suitable vessels and equipment, shortage of marine qualified personnel, shorter project schedules, tighter budgets, the difficulties of traceability of materials and equipment quality. The decreasing availability of the reserves pushed the industry into difficult areas like deep water and ice fields trying new operation methodologies, this, lifts the risk on the exploration. As consequence of the previous, and quoting Mr. Ewan Gilmour CEO of Chaucer “ *With an industry operating at full capacity and high oil price, energy claims costs have raised significantly during the last two years. In response, energy underwriters have tightened terms and conditions, notably for claims and deductibles*”.

On the other hand, we have the major oil companies, opting for a ‘self-insurance’ scheme creating a private owned Insurance company as the case of PEMEX with Kot Insurance<sup>37</sup> and British petroleum with Jupiter insurance LTD, both of them captive companies of their respective parent company.

The question is why do these companies choose to create a Captive Insurance company in order to insure their risks?

In the above mentioned cases is not unusual that they believe they are covered as additional assureds under their contractor’s policies, and only come to discover the reality once the insurance loss adjuster is appointed by the Insurance /reinsurance company after the occurrence of a major casualty that exceeds their deductible. (See *Certain underwriters at Lloyd’s of London and Various Insurance Companies V, BP pie, BP Exploration & Production, et al. Case 4:10-cv-01823 Filed in TXSD on 05/21/10*)

Wirth respect to the placing of the insurance on the offshore industry, it’s important to divide the most common Marin energy covers in 2 (plus endorsements when applicable):

- a) Well Control Insurance.
- b) Physical Damage and Business interruption.

---

<sup>37</sup> Revista fortuna.com.mx/contenido/2009/06/15/seguros-de-pemex-por-8-mil-mdp/

The Well control coverage products offered currently in the insurance market are two policy forms: a) Operator's extra expense (OEE) and b) Energy Exploration and development (EED 8/86). The first one comes several wordings; the second is commonly used as a standard form. Nonetheless, on the core of the coverage, both policies are similar.

The common coverage include (usually on the form of endorsement):

- \*Control of well.

- \*Re-drilling/restoration/re-completion.

- \*Seepage and pollution/ Clean up and contamination.

- \*Care, custody and control (Third party equipment) .

## **2.4 Problems or advantages of the captive insurances.**

This issues, can be considered and advantage for the oil drilling companies and a problem for the insurers and governments thus leading to crossed attempts to modify the current insurance legislations.

For example, a captive insurance can be used as a way to lower the standards of the offshore drilling industry:

- a) It is not necessary to comply with marine survey warranty.

Marine aspects on each phase of an offshore project require the operation of very complex and specialized equipment and MODUs, thus, due to the specialized of this equipment the potential risks on the offshore operation are higher than onshore drilling. These risks created the necessity for the insurers to appoint an independent 3<sup>rd</sup> party of specialized surveyors capable of analyze the operations on behalf of the insurance company and not the insured party. In order to cover this necessity the underwriters created the figure of offshore marine surveyor or Marine warranty surveyor (MWS). The surveyor is responsible of ensure that the offshore operations are designed, constructed and maintained accordingly to acceptable industry standards. They will also assess that safety protocols are followed. After a satisfactory completion of the survey they will issue an approval known as Marine Warranty Certificate.

In case this insurance warranty is breached, the insured will be in a weak position in case of a loss occurring. These must be analyzed

accordingly to the applicable law, since, for example, under English law, the breach of this marine insurance warranty will void the insurance policy, that is to say, that no materiality and causal link is required (*Hahn v. Hartley*) this, can be considered as ‘one of the less attractive features of the English insurance law’ (*Forsikringsaktieselskapet Vesta v Butcher*) as there is no need of link between the breach and the loss in order to discharge the insurer from its liability, nonetheless, for most civil law systems, the breach must be material and linked to the loss (Causation) to be relevant. In other words, the loss shall be a consequence of the breach of warranty. On the other hand, the unpredictability of the American law (*Wilburn Boat*), makes difficult to know the outcome of a breach of marine survey warranty claim filled in the United States.

b) Registration on flag of convenience (open register).

These can give diverse advantages as lower taxation and lower operational expenses, but also lower quality and safety standards and a very reduced from the flag state. As we referred previously, most insurance companies are unlikely to insure a ‘open register’ vessel, therefore being a self insured company this insurance problem mainly for the MODU’s is discharged. (see Deep Horizon registered in the Marshall islands.) .

## **2.5 Insurance and safety issues**

Under International law, the offshore Oil rigs get the treatment of vessels, therefore they can be registered at any flag of convenience (open register), (referring to Flags like Panama, Marshal Islands, Bahamas, Libya etc...) According to Rep. James L. Ibestar, chairman of The House of Transportation Committee of the United States, referring to the Gulf of México casualty. *‘Today, these oil rigs can operate under different, very minimal standards of inspection established by international maritime treaties’*.

Under the Jones Act, structures that go beyond the traditional notion of vessel are included, commonly known as “brown water vessels”.<sup>38</sup> The American court has decided to expand the definition of Vessel (and so did other countries, see §33 of the

---

<sup>38</sup> “Brown Water Vessel Status”, Vol. XIV, No. 1, January, 1999 issue, Louisiana Advocates

Norwegian Maritime Code.) seeking to include the offshore oil and gas structures, and establishing the differences between the diverse exploration and production units, mobile and fixed, including on the definition of Vessel semi-submersible drilling units, jack-up rigs and drilling ships.<sup>39</sup>

The Deepwater Horizon was a mobile drilling rig, this type of drilling rigs are placed on the explored area and in case the drilling successfully finds an oil reserve, a cement plug capes the well, the rig is moved and then the oil licensee builds a fixed platform at the site. Therefore, under maritime law, due to its “capability of being used as a means of transportation on water” the Deep Horizon was a vessel, fixed platforms tend to be considered by American law some sort of artificial islands<sup>40</sup> and therefore Maritime Law would not necessarily apply.

There are several maritime law implications of the Deep Horizon being treated as a vessel one of them is that the 1851 shipowner’s limitation Liability Act<sup>41</sup> would apply. –Some authors consider that “*given today’s corporate law protection and insurance, the need for limitation is questionable*”<sup>42</sup> Another implication, is the applicability of the Oil Pollution Act 1990<sup>43</sup>

A ship registered in a foreign flag will be usually reviewed and surveyed by the host country, nonetheless, they tend to rely on the reports performed by the external companies hired and paid directly by the owners in order to obtain information regarding the operation, compliance with the industry standards and safety in the vessel.

The USA congress expressed in several occasions their concern regarding the increasing tendency of ship owners to register their vessels in countries that cannot provide a reliable set of regulations and supervision of the operation. Offshore experts have been questioning the connection between the flag of convenience, and the increased casualty rates in offshore rigs.

What is a fact is that since the Deep Horizon Blow out, the USA Congress has directed their special attention to the foreign flagged offshore rigs in the Gulf of Mexico. Paying special concern into the apparently improper manning procedures, that, for example, in the case of the Marshall Islands registered vessels, and which was flag

---

<sup>39</sup> *Manuel v. P.A.W. Drilling & Well Service, Inc.*, 135 F

<sup>40</sup> *Bertrand v. shell oil co.* 489 F.2d 293 (5<sup>th</sup> Cir. 1973)

<sup>41</sup> §§30501, et seq. Limitation of liability similar to that enacted in England. “Limitation of Vessel Owner’s Liability; Inapplicability to Non-Shipowners”, Vol IX, No. 1, International Trade Law Journalm South Texas College of Law.

<sup>42</sup> Frank L. Maraist & Tomas C. Galligan, Jr., *Admiralty in Nutshel*, 304(5<sup>th</sup> ed 205).

<sup>43</sup> Not applicable to personal injury or wrongful death claims.

of registry of the Deep Horizon, places the decision making on a confusing command structure shared by an oil rig drilling expert (Offshore installation Manager) and the Sea Master (Captain) of the oil rig. In the case of the Deepwater Horizon the command was ultimately placed on the Offshore installation Manager, causing a debate on the industry regarding who should make the final safety call. This shared command, despite being common within the oil industry, would not be allowed under USA flagged offshore drilling operations.<sup>44</sup>

## **2.6 The self Insurance risks and the use of private insurance companies as a safety control measure.**

In most countries including the USA, insuring a vessel was an internal issue within the scope of the owners of the offshore vessels and other facilities, until on or about 1969 when the 1969 International Convention on Civil Liability For Oil Pollution Damage came to life.<sup>45</sup> The convention established the necessity of compulsory insurance followed by the strict liability statutes after the Exxon Valdez oil Spill ratification of the OPA.

The Oil Pollution Act enacted in the United States clarifies the rationale behind all this oil pollution legislation, in the offshore oil and gas exploration and production, being the main purpose, the creation of a rigid mixed system of Financial Responsibility Laws, strict liability and compulsory liability insurance. Thus, providing the funds to paid damages, and appointing a liable person, and a shortcut ‘cut trough’ in order for the third party injured to claim directly from the insurance company. The main advantages of the strict liability are that, it avoids long litigations and also it exempts the negligence test and intention to cause damage, elements that are necessary in tort law<sup>46</sup>.

Due to this strict liability channeling to the offshore operator, they can’t argue that the 3<sup>rd</sup> person injured caused the injury in part or in total by own negligence.

In order to meet the insurance requirements of the OPA, it is required that a lease holder engaged on the exploration of an offshore well demonstrates at least

---

<sup>44</sup> Coastalcare.org/2010/06/offshore-rigs-and-flag-of-convenience/

<sup>45</sup> International Convention on Civil Liability for Oil Pollution Damage, 1969.  
[www.imo.org/conventions/contents.asp?doc\\_id=660&topic\\_id=256](http://www.imo.org/conventions/contents.asp?doc_id=660&topic_id=256)

<sup>46</sup> §1016 OPA, oil and gas exploration and production in the Gulf of Mexico must maintain Oil spill financial responsibility capable to meet their liabilities for cleaning cost and damages.

USD\$35million per 35,000 barrels and USD \$150 million for non covered facilities. The common practice to demonstrate this requirement of financial responsibility can be complied through securities, bonds, letters of credit, Insurance certificates and self insurance.

Insurance and reinsurance companies, seeing the increasing necessity of product to cover this legal necessity created a coverage suitable for the offshore energy industry, covering pollution from blowouts, well control, damage to machinery and other liabilities mainly in the market based in London and Bermuda,

After the Macondo blow out, the response of the United States of America Senate was to introduce several bills in order to prevent a future oil spill (See Senate Bills 3305, H.R.. 525 and Amendments to Water Pollution Control Act for the use of Oil dispersants)<sup>47</sup> now, the question arising is whether the governments of the major oil reserve owning countries will legislate on the same fashion, or they will keep a more conservative view on this issue. Special considerations should be made to the insurer's reactions expressing that, worldwide, there is no capacity to provide such coverage.

In words of Ron Baron, executive vice-president of Willis, Global Energy Practice during the Big Oil Bailout Prevention Liability Act of 2010,<sup>2</sup> *"The offshore energy insurance market liability capacity is finite, including coverage for offshore oil pollution spills in US waters, its somewhere between USD\$1.25 billion and USD\$1.5 billion"*<sup>48</sup>

The fact is that those bills, in general terms, propose the lifting of the legal liability cap from USD\$75 million to 10 billion. Therefore it should be considered that is not likely for the countries holding major insurance markets like England and having a strong shipping tradition to lift this cap. The raising of the liability as the United States of America senate enacted seems more a political decision taken in order to push the small drilling companies and the private Insurance market out of the business than a real legal resonated Act. On this matter, diverse analyst including Rawle O.King, recommend the congress to look for diverse ways to allocate the risks in diverse mechanisms (for example the creation of reinsurance sidecars)<sup>49</sup>

---

<sup>47</sup> Oil Offshore Spill Senate bills

[www.iadc.org/offshore\\_GOM\\_reform/documents/Legislation%20and%20Hearings%Running%20List.pdf](http://www.iadc.org/offshore_GOM_reform/documents/Legislation%20and%20Hearings%Running%20List.pdf)

<sup>48</sup> [Http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore\\_id=304d3142-8460-40e8-abd7-2f129285946b](http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=304d3142-8460-40e8-abd7-2f129285946b)

<sup>49</sup> Deepwater horizon Oil Spill Disaster: Risk, Recovery and Insurance Implications. Rawle O. King. Report for Congress.

Now, for the big oil companies this new liability seems not to be any issue at all, since they count with the enough capital to provide the liability required in order to drill in the American waters, (including Alaska).

The rationale given by the congress as why to raise the liability cap, is that, the higher the economical liability is imposed, the more likely the companies are to care about their safety procedures and lower their Incident rate.

The question raises weather if in a world moved trough money, some companies might feel tempted to find ways to obtain a short term profit, by lowering standards and –crossing fingers- no casualty occurs (as can be seen on diverse communications held by the operator before the Macondo Blow out), and, being the case that a –worst spill-scenario is developed, the balance, between the liability to be paid, and the profits already obtained, will be favorable to them. Therefore, raising the liability is not a good rationale in order to incentive safety, but it can be a shortcut to avoid supervision form a third party as would be an Insurance company. The liability regimen should be reviewed and enhanced with other mechanism, for example, compulsory private market insurance.

Major oil companies, main argument with respect to why do they ‘self Insure’, is that, they count with enough economical resources in order to do so, since, in case of a ‘worst scenario’ oil spill they have enough capital to cover the damages. Current legislation in most jurisdictions, do not provide any rule against placing a self insurance (or this can be overruled by the use of reinsurance fronting). and this companies, also add that the liability frame is legally enough incentive to monitor safety in their daily operations.

Even if they do posses enough capital to place a security amounting to the OPA requirements, in case of a blow out or other incident, the first economical consequence is the fall down of shares and stocks, therefore, the question raises, if the security provided on, for example, shares will still be enough to cover the OPA requisites after a blowout has been public and the operators value drops.

In my opinion, is not a coincidence that the big oil companies, which possesses enough capital to –Self Insure-, decide to do so. Since, there are several “incentives” to do this. Including the fact that they don’t have to justify to their accountability departments and board members why it’s necessary to go through so many safety protocols and insurance costs. Raising the OPA seems more like a way of providing the big oil players with a bigger playground, pushing out the small competitors (including

insurance companies) and making a 'self ruled offshore energy industry' were the big oil majors are lobbying their own rules and winning their own legal framework mainly in the USA. (Not an unknown strategy to the maritime industry in a historical perspective if we consider that the legal regulations have always been sided to protect the ship-owners interests).

When a oil major company self insures, regardless if it's done through a captive company or through other means of capital, they have a liability exception. Something, that being Insured on the private market it's not so easy to accomplish. Legally, the only exception to the strict liability appointed by the OPA (Following the comprehensive Environmental Response compensation and liability) and international conventions, are Act's of god, acts of war, or 3<sup>rd</sup> party not in contractual relationship with the oil reserve lessee causing the damage. In practice, an act of 'Bankruptcy' can do the job as an exemption. When a company faces liability that goes over their capital and economical capacity, they can get hold on a bankruptcy process, and avoid payment in most jurisdictions, in case of company dissolution being approved, for example if it's hold in the United States of America, the damage costs for a blow out oil spill, would have to be paid from the Oil Spill liability trust fund (on its capacity).

In addition, an this is where the truth issue comes to play, when the self insurance is placed, through for example, a captive insurance company, one big historical safety leg in the maritime industry is broken.

One of the main historical and practical roles of the insurance industry has been the monitoring and recording of incidents occurred or caused by certain company. Great part of the work of the insurance companies risk assessments of the companies they will insure is also to analyze their accident rate and safety violations, and kept record of them, being this some of the point's they evaluate in order to establish a premium or decide not to provide the insurance. Other activity that the insurance companies tend to carry out is the revision of the operation plans and surveying before they underwrite a policy or renew the same (Marine Survey Warranty)<sup>50</sup>. This is performed by specialized marine surveyors that have been approved by the insurance company and have a lot of knowledge on the matter. In paper, the host country should carry this procedure in a same manner, as the Flag state (when applicable as the case of the MODUS) should also

---

<sup>50</sup> Consequences of non compliance with this warranty vary according with the jurisdiction, and will be briefly discussed herein under.



be performed according to their own regulations, in practice, these entities have such a load of work that tends to minimize the surveying's, giving this a main importance to the insurance marine surveyor.

Oil companies drilling offshore deposits obtain their profit from the retrieve oil and the commerce of the same, an accident would be diminished from their profit, or covered by the Insurance that, if it's a captive company will eventually be deducted from taxes and ended up in a low profit loss. In opposition, the insurance companies profit, comes from the difference between the premium paid and the incident rate, that is to say, the less losses they have to pay, the higher their profit is. Their risk assessment is important in this regard, since, if they insure a company that has bad record, and high loss occurrence, their profits will be diminished.

Due to the above mentioned, for the insurers, it's important to develop better safety practices, and have expert people in charge of reviewing the risks they will underwrite. Private market insurers –do have an incentive- to care about the safety and survey the companies they underwrite (normally done so through a marine surveyor), since this is the factum that they will use to establish and / or adjust the premium

As above mentioned, raising the liability is not a good incentive for the companies to have better (and costly) procedures, nonetheless, instituting some sort of compulsory private market insurance (or the prohibition to the self-insurance schemes), in addition with the other legislative changes, and avoiding raising the cap up to USD\$10 billion, might actually be an effective way to ensure safety standards are raised within the industry.

A practical, (perhaps not so orthodox) example of how financial legal liability raise is not necessarily an incentive to increase the safety protocols on the industries follows from the Aviation Insurance Industry, after the occurrence of 9/11, liability was raised and also diverse endorsements were created (i.e. Voluntary settlements which purpose is to –buy- injured passenger or family of deceased liability releases). During an informal conversation held on or about 2008, with 4 aviation insurance experts<sup>51</sup> and some casualty surveyors, an issue discussed in the table, was, that, in the years to come, the world would experience an increase on the airline accident rate, since, due to the economical crisis, it was economically more profitable to pay higher insurance premiums due to higher casualty rates (obs. many airlines are self insured), than paying

---

<sup>51</sup> Due to confidential and ethical issues, names of the attendees can't be disclosed.

for a C Check<sup>52</sup> therefore, it was necessary to introduce some figure similar to the marine survey warranty into the aviation insurance policy. If this is accurate or not it's out of my knowledge, nonetheless what is a fact is that in the recent years the aviation accident rate has been raised from 23 written off commercial airliner casualties per year average to 33 written off commercial airline average per year (as to September 1<sup>st</sup> 2011) (nonetheless the fatality rate decreased from 632 to 479).<sup>5354</sup>

Another example will be as to which extent, an Insurance company will be willing to insure a company which project is to drill in the arctic.

The National Commission on the BP Deepwater Horizon Oil spill and Offshore Drilling emitted its final report on January 2011 regarding the adequacy of drilling in new areas stating that the "Scientific understanding of environmental conditions in sensitive environments in areas proposed for more drilling such as the Arctic, is inadequate. The same is true for the impact of oil spills" In the view of this, a extensive research is being performed in the Arctic mainly in the Beaufort and Chukchi Sea in order to try to understand the possible impact of an oil spill and the response methods.<sup>55</sup>

## **2.7 The oil companies view regarding modifications of the legal insurance requirements for offshore drilling.**

Diverse oil Companies like Contango oil & Gas, aim to a less 'one size fits all' legislation, were the requirements for shallow waters and deep water drilling became suitable and fair considering, that the risk and technological challenge differs depending on the place to be drilled and projects ambitions. A Shallow water well is drilled less than 200 feet from sea level, and therefore should not be treated as a deep water drilling. A Shallow water well can be easily reached by divers, whereas a deep water well greater than 20.000 feet can only be handled by subsea units. Thus, the shallow waters drilling companies main argument, is that gaining control of a blowout on shallow

---

<sup>52</sup> Overhaul maintenance on the aircraft.

<sup>53</sup> Aviation Safety Network Safety indicator accidents involving over 13 passenger civilian aircrafts.  
[www.aviation-safety.net/statistics/period/barometer.php](http://www.aviation-safety.net/statistics/period/barometer.php)

<sup>54</sup> A safety issue arises here, considering the USA, known as the 'safeties nation' is also the region rated with the highest fatal accidents, followed by Russia, Colombia and Brazil.

<sup>55</sup> <http://republicans.energycommerce.house.gov/Media/file/Hearings/Energy/041311/Grafe.pdf>

waters is less challenging than a deep water blowout as the Macondo Deep sea Horizon.  
56

The proposal by diverse governments and specially the USA Congress is increasing the liability cap to up to \$10 billion American dollars for any type of offshore drilling (Before the Macondo, according to the OPA, the liability cap was up to USD\$75million). Thus, the Insurance Companies have been working on developing products more suitable for the new market needs. As a reference, a company like Contango counts with a \$175 million insurance, covering well control insurance in case of a blow out and third party liability (including pollution liability).<sup>57</sup> Claims above the cap can be made on the Oil Spill Liability Trust fund.<sup>58</sup>

---

<sup>56</sup> Contango.com/investor/news/pr200\_050610.pdf

<sup>57</sup> idem

<sup>58</sup> USD\$1.6 billion limited to USD\$1billion per incident.

## Chapter 3 The Macondo. or “The well from hell”<sup>59</sup>

*“The Deepwater Horizon blowout, explosion, and oil spill did not have to happen.”*<sup>60</sup> The Macondo, as we will see further, is the best example that the drilling industry will not perform adequate risk management without the proper governmental supervision. Nonetheless, a proper legal body addressing this issue is not sufficient to prevent this from happening again. It is necessary to change all the safety within the industry. Currently diverse jurisdictions like the American, are seeking to resolve the problem by curing the sickness instead of preventing it.

### 3.1 Allocation of liability in the offshore drilling joint venture (contract of risk or drilling contract).

The normal procedure in order to obtain the right to explore and exploit of resources in the sea bed is through public tender, where the interested companies bid for a concessionary license. These companies, due to the high risk of the operation tend to bid in joint ventures, being represented usually by the major party of the joint venture which is known as the ‘operator’. The operator, most likely will contract and subcontract companies to perform the actual drilling. Typically, the ‘contractor’ will be the owner of the MODU’s.

Due to the nature of the operations, it is not strange that the tortfeasor and the damage receiver are involved with the oil activity and even work in the same project, therefore, the standard drilling contract will be based on the knock to knock principle, where the potential liability is distributed in the following manner: *“Each party will assume liability for their personnel and property within its own group, affiliate and other contractors, and shall indemnify the other party accordingly irrespective of cause or circumstances, and irrespective of gross negligence or willful misconduct.”*<sup>61 62</sup>. That

---

<sup>59</sup> **Testimony of Nathaniel Chaisson, 411; U.S. Department of Energy, Well Configuration (BP document made public by the Department of Energy),**  
[http://www.energy.gov/open/documents/3.1\\_Item\\_2\\_Macondo\\_Well\\_07\\_Jun\\_1900.pdf](http://www.energy.gov/open/documents/3.1_Item_2_Macondo_Well_07_Jun_1900.pdf);  
Testimony of Natalie Roshto, Hearing before the Deepwater Horizon Joint Investigation Team, July 22, 2010, 15.

<sup>60</sup> Deep Water report to the president of the United States of America. Pp 217 Chapter 8.

<sup>61</sup> Conversation with Mr. Tomas Nilse, Charter Manager of Deep Sea Supply.

<sup>62</sup> See standard contract for MDR mobile drilling rig. Clause 19.

is to say that in principle, each party of the joint venture must provide their own insurance coverage. Unlikely, as we have seen previously in many occasions the operators assume they are covered by the contractor's insurance policy.

### **3.2 The parties Involved in the Macondo blow-out.**

#### **a) Joint venture Between**

- i. British Petroleum owning 65% of the well.
- ii. Anadarko Petroleum Corporation with a 25% of the well.
- iii. Mitsui Oil Exploration Company of Japan owning a 10% of the well.
- iv. Transocean LTD owning the oil rig Deepwater Horizon registered in the Marshall Islands.

#### **b) Other parties involved:**

- i. Cameron International as the manufacturer of the blowout preventer.
- ii. Halliburton as the drilling contractor that cemented the well.<sup>63</sup>

British Petroleum, being the leader of the project, is expected to assume most of the liability, except for the specific liability corresponding to Mitsui, Anadarko, Transocean and in its case, Cameron and Halliburton.

Insurance experts consider this case as probably the most intricate and complex insurance matter as to day<sup>64</sup>. From the policy terms, the language used, to whom is liable for what and up to which amount among other issues.<sup>65</sup>

The Macondo Blowout is the second biggest oil disaster, exceeded only by the Ixtoc I in 1979 in the coast of Campeche Mexico<sup>66</sup>. The Macondo spill is estimated to be more than Four times the size of the Exxon Valdez spill occurred on the Prince islands.

---

<sup>63</sup> Insurance Information Institute [www2.iii.org/advanced\\_search/index.cfm](http://www2.iii.org/advanced_search/index.cfm)

<sup>64</sup> Conversation with Nicholas Medniuk from Clyde and Co. Beaumont and Sons London.

<sup>65</sup> Deepwater Horizon Disaster Narrated Presentation [www3.iii.org/video/deepwater\\_](http://www3.iii.org/video/deepwater_)

<sup>66</sup> The Ixtoc 1, being probably one of the best examples as how jurisdiction can put a claim in a upside-down position.

### 3.3 The Macondo well Blow out timeline.

During the first quarter of 2010, Transocean's ultra deepwater semisubmersible mobile Horizon Operated by British Petroleum (BP with a 65% share, Anadarko petroleum a 25% and Mitsui with a 10%) performed well drilling in the Gulf of Mexico 81 km from the coast of Louisiana. The exploration project successfully found a major oil reserve and the well was sealed with cement on the morning of April 20 by the contracting company 'Halliburton' and the deep horizon rig was about to be relocated.

On, or about 9:45 pm of the same day, a large blowout of methane ignited and produced an explosion. 11 workers were killed<sup>67</sup>. Preliminary reports appoint the possible cause of the explosion as insufficient quality on the cement used, insufficient power, failure of the hydraulic systems, and excessive thickness on the well casings summed to a lack of coordination and issues on the manning of the Horizon.<sup>68</sup>

According to the governmental document '*The view of events*' by Henry A. Waxman, the explosion of the Macondo was the result of lack of proper supervision and testing on the closing of the well. In this regard main considerations are done with respect to the quality and supervision of the cementation<sup>69</sup>. It is to be noted that inadequate cementation has been found as the cause of 18 out of 39 blowouts investigated by the American Federal Government Minerals Management Service.<sup>70</sup>

The Operator, British Petroleum PLC (BP LN) was self-insured throughout a captive company named Jupiter Insurance LTD. As a first consequence of the accident, BP's shares drop immediately after the blow out, and the company admits in a press release their liability with respect to pollution caused from the leaking well and therefore their responsibility for the cleaning operations. Nonetheless this is only a strategy to reduce the reputation damage.

BP through its captive Jupiter Insurance Ltd, counts with USD 6 billion with a limit per occurrence for business interruption and physical damage capped at USD\$700 million. Jupiter Ltd does not place reinsurance in the private market and this coverage does -not include clean up expenses either 3<sup>rd</sup> party liability-.

On the other hand, British petroleum shipping acquires a USD\$1billion insurance for pollution liability through a P&I club.

---

<sup>67</sup> [http://ccrm.berkeley.edu/pdfs\\_papers/bea\\_pdfs/DHSGFinalReport-March2011-tag.pdf](http://ccrm.berkeley.edu/pdfs_papers/bea_pdfs/DHSGFinalReport-March2011-tag.pdf)

<sup>68</sup> [http://www.deepwaterhorizonresponse.com/posted/2931/FRTG\\_Fact\\_Sheet\\_5\\_26\\_1.559427.pdf](http://www.deepwaterhorizonresponse.com/posted/2931/FRTG_Fact_Sheet_5_26_1.559427.pdf)

<sup>69</sup> <http://energycommerce.house.gov/documents/20100614/Hayward.BP.2010.6.14.pdf>

<sup>70</sup> <http://www.oilspillcommission.gov/final-report>

Andarko Petroleum and Mitsui Oil Exploration count with a USD\$100million and USD\$45 million well control coverage respectively.

Transocean counts with a USD\$560 million policy for physical damage and its said to count with a USD\$950 million in 3<sup>rd</sup> party liability. (There is a debate whether the exact figure is UDD\$950 million or USD\$700million.).

Cameron, the blowout preventer manufacturer has a USD\$500million product liability insurance policy placed. And Halliburton counts with a liability insurance in excess of USD\$1billion.

Due to the self insurance scheme of British Petroleum no reinsurance placed in the private insurance market, and considering that BP owns 65% of the project, the estimated exposure for the private Insurance market is somewhat between USD\$1.4 billion and USD\$3.5 billion, risk that is shared within diverse syndicates of insurers and reinsurers around the world but mainly in the London Market. This is an amount not as disastrous as could have been for the insurance market if BP had placed insurance or reinsured the loss.

### **3.4.The legal liability.**

The question here, is how to spread the liability and appoint who is legally responsible. It is not clear yet how the insurance policies were underwritten. We have not only many companies in the game, but also a wide range of laws applicable to the disaster, including international and national criminal and civil laws, International treaties; state and federal, maritime and energy laws and international conventions, just to mention a few. And furthermore the possibility of a retroactive enactment of a modified Oil pollution Act of 1990.(hereinafter referred to as OPA)

Transocean has already requested in a court in Texas the limitation of its claim to USD\$27 million under the limitation of liability act of 1851. (Maritime Accident liability cap.)<sup>71</sup>

The few issues that are clear on the matter are that the Deep water Horizon rig Insurer is liable for the damage to the Rig and or the replacement. The rig suffered a total loss and its insured value was USD\$560 million.<sup>72</sup> In any case there's still ongoing

---

<sup>71</sup> <http://gcaptain.com/transoceans-insurers-horizon?26895>

<sup>72</sup> <http://www.marketwatch.com/story/deepwater-horizon-loss-spills-into-catlin-chaucer-2010-05-07>

debate whether if the claim can be discharged due to gross negligence or any other exception.

As we discussed previously BP had no external insurance placed in order to cover the accident, therefore, even though BP disclosed its liability in public, their legal strategy is attempting to claim up to USD\$700 million from Transocean's insurers, arguing that Transocean policy can be affected considering they were responsible for the blowout of April 20. The BP spokesman held that "*We believe we may be entitled to coverage for the incident under Transocean's insurance.*" (see *Case 4:10-cv-01823 certain underwritings v BP*)

The complexity of the matter is rising as the time passes by. Now, more than a year and a half since the blow out spill occurred, the litigation has been brought to diverse jurisdictions, with claims being filled in diverse states of the USA and the UK.

Andarko pushed the liability towards British Petroleum accusing the company of being reckless negligent, and British Petroleum appoints the Halliburton's faulty cementation as the main cause of the loss. Halliburton's defense is that they followed instructions given by British Petroleum and. British Petroleum keeps seeking to hold into the coverage of Transocean insurance policy. Transocean Insurers position and defense is that the coverage is only limited to surface spills and not those from a blown out well. Here we can see the problem of the contractual allocation of liability being also compromised by the 'talismanic language'.

British Petroleum first legal action was to fill a claim in the USA court on Houston Texas requesting the court to grant the coverage for cleanup costs and damage claims under Transocean's policy.

These affirmations immediately produced the reaction of at least 38 Lloyd's underwriting syndicates, plus a string of other international insurers affected by the disaster which filed individually legal documents rejecting British Petroleum's Claim in a Houston Court. In legal documents submitted in a Houston court they request the court to reject British Petroleum claim to be covered as additional insured.

According to the OPA British Petroleum, is strictly liable, and as a responsible party is liable for all clean up costs and claims under OPA up to a total of USD\$75million (holders of leases or permits for offshore facilities are strictly liable for up to USD\$75 million per spill plus removal costs). Nonetheless, according to the same act, a civil penalty for each barrel of oil spilled would be imposed for USD\$1,100 per



barrel, in case of gross negligence, for the amount of USD\$4,300 per barrel. In case of gross negligence, according to the same act, the responsible party loses its right to limit.

That is to say, that as today, British Petroleum's liability is capped at USD\$75million and Transocean's at USD\$65 million, amounts that can be modified depending the final findings and court settlements regarding gross negligence and if there was safety rules broken that led to the oil spill.<sup>73</sup>

They may also face liability under statutory law for Oil Spill Prevention and Response Act.<sup>74</sup>

### **3.5 The impact of the self insurance in the handling of the Macondo Legal liability.**

The Macondo legal impact and the legislative effect: (Should captive Insurance companies be banned and compulsory private market acquired?)

#### **1. The lawsuits:**

i. As a starting point of comparison we must address that the legal actions regarding the Exxon Valdez Oil spill in Alaska a less complicated matter than the Gulf of Mexico's blowout lasted about 20 years, and in this scenario, where the total cost may hit the USD\$40 billion experts express that is impossible to make an accurate prediction of how the issue will evolve. In addition, on the Exxon Valdez matter, the direct defendant was Exxon, in the Deep Horizon matter, the legal suits can be filed against British petroleum, Anadarko petroleum, Mitsui, Transocean, Halliburton and Cameron.

ii. The Deepwater Horizon Disaster Victim Fund. An scheme created following the victims compensation fund created after the September 11 attacks, which in its case, was a governmental fund created by an act of congress and where most of the claims were for personal injury/death and that gave a new twist to the Insurance market creating a series of endorsements, was used as precedent to compel British Petroleum to create a BP oil spill compensation fund which was created by an agreement between BP and the USA

---

<sup>73</sup> CRS Report R41262, "Deepwater Horizon Oil Spill: Selected Issues for Congress" by Curry L. Hagerty.

<sup>74</sup> Due to the scope of this paper, this will not be discussed

Government were most claims are damages (mainly economic losses), and therefore more prone to fraudulent claims.

On the matter of personal claims, it's still to be seen the evolvement of future claims filled by the workers of the cleanup, as the history shows in cases like the Exxon Valdez, that within the years, the workers developed health issues due to the inhalation of the vapors released by the oil and the dispersants used during the cleanup efforts. It's a fact that the amounts of dispersants used on the deep horizon cleaning were higher. The effects and toxicity of this chemicals are still limited, since, one of the side effect results of the lawsuits filed by the Exxon Valdez cleanup workers, was that their medical confidentiality right was disrupted and thus dispiriting workers to claim.<sup>75</sup>

In June 16 2010, BP's 'The Deepwater Horizon spill disaster victim fund' was established in order to cover up to USD\$20 billion in legitimate claims and naming Ken Feinberg as the administrator due to his previous experience handling this kind of funds. Feinberg was in charge of the September 11<sup>th</sup> compensation fund and has been involved in diverse compensation funds<sup>76</sup>- The question arises with respect to how the claims will be paid, which type of claims, the claimants burden of proof and we should not forget the 'Insurers' ongoing battle' regarding which coverage should be affected.

One year after the sinking of the Deepwater Horizon in the coast of Louisiana, an amount close to 4 billion dollars has been paid on claims. According to M. Kenneth Feinberg<sup>77</sup> on Interview dated April 20 2011 Mr. Feinberg declared *'in nine months we've distributed just about four billion; 300,000 claims have been honored. I've received 857,000 claims from 50 states, every state in the union we've had claims filed, some very creative. We have denied claims. We have asked for more documentation for claims. We have, in the queue, we have processed 78 percent of all the claims. And they're getting filled hundreds of claims every day... processed means settled and paid, offers made, claims deemed deficient, we need more proof or out and out denied'*

These claims are being paid on 3 ways:

- a) A final payment waiving your right to sue. (17,000 claims have been settled in that manner).

---

<sup>75</sup> Derek Jones conference given to the New York office of Milliman. [Derek.jones@milliman.com](mailto:Derek.jones@milliman.com)

<sup>76</sup> [www.bp.com/genericarticle.do?categoryId=2012968&contentId=7062966](http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7062966) BP pressrelease dated 16 June 210.

<sup>77</sup> Interview for the National Public radio dated April 20 2011.

Wwwnpr.org/player/v2/mediaPlayer.html?action=1&t=1&islistfalse&id=135574677&m=135576616

b) A quarterly payment documenting damages each quarter without waiving suing rights.

c) Emergency payment. No documentation asked as a physical person the payment amounts to USD\$5,000, as a company/ business the compensation amounts to USD\$25,000 waiving right to sue. (112,000 claims have been settled this way).

d) Litigation in court.<sup>78</sup> On this regard is difficult to obtain an accurate number of lawsuits.

a. The Insurance side effect. (Marin, Energy, oil and gas)

i. As a consequence of the Macondo Blow out, the insurance cost for offshore drilling may increase up to 150 %. An increase of 50 % of the insurance cost has been already observed. This is hitting the offshore producers (mainly on the deep water area not so in the shallow waters where the increase has been observed to 15% but is expected to rise up to 25%). It must be added that is expected by the syndicates to double this amount within 2011-2012.<sup>79</sup> It is important to mention on this regard, that before the accident of reference, the prices of offshore gas and oil insurance operations decreased on a 15%.

ii. Before the Macondo Blow out it was possible to obtain an insurance policy covering all the companies involved in the drilling (umbrella Insurance Coverage), this seems not likely to be profitable for insurance companies anymore, thus, requiring each single participant of the drilling operation to contract their own Insurance policy.

iii. Most Insurance / Reinsurance companies are seeking the re-drafting of their underwriting guidelines in order to dig deeper into the fire and explosions risks. Making the -Marin Survey Warranty- take a new direction regarding the underwriting process.

---

<sup>78</sup> Idem

<sup>79</sup> Market Scout CEO Richard Kerr

iv. The most important issue, is, weather the Insurance companies are capable of provide the coverage that might be required by the new regulations.

v. After the Macondo blow out, and the probable raising of the insurance coverage required by the USA in order to obtain a license to drill, being raised from 75 million USD to 10 Billion USD, The USA congress is practically pushing away most of the London market insurance providers and the small drilling companies that, cannot provide a insurance covering that amount. The question is if this is some sort of strategy of the "big oil companies creating their own rules".

b. The legislation: (Liability Cap).

i. The American congress is seeking to raise the OPA<sup>80</sup> liability retroactively to USD\$10 billion. The current cap on liability according to the Oil pollution Act of 1990 is to cover all the cleanup costs, plus liability damages up to a limit of USD\$75million -which can be unlimited if there is gross negligence, willful misconduct or if there was a violation to the federal safety construction or operation regulation which was not complied with-. . On this matter, Dr. Robert Hartwig, president of the Insurance Information Institute testified on public hearing to the USA congress, stating that the private insurance and reinsurance market have no capacity to provide such liability requirement coverage.<sup>81</sup>

ii. The Selfinsurance:

1. The big companies tend to have a self-insurance scheme to protect them against their risk exposure. Lifting the cap of the insurance to up to USD\$10billion, coverage that the private insurance market cannot provide -at least for the moment- as stated by diverse syndicates, will leave the small offshore oil drilling and exploration players on a difficult

---

<sup>80</sup> 33 U.S.C.A. §2701, et seq.

<sup>81</sup> III testifies on the liability and financial responsibility for oil spills under the oil pollution act of 1990 and related statutes. [www.iii.org/presentations/iii-testifies-onthe-liability-an-financial-responsability-for-oil-spills-under-the-oil-pollution-act-of-1990-and-related-statutes.html](http://www.iii.org/presentations/iii-testifies-onthe-liability-an-financial-responsability-for-oil-spills-under-the-oil-pollution-act-of-1990-and-related-statutes.html)

situation, since their assets will not let them provide a self insurance scheme, that plus the fact that the marine energy insurers will not be able to provide and also have stated they are not willing to provide such a high exposure coverage most likely will force the small oil exploration companies to leave the offshore drilling business. This, being an ouroboros game that will also displace the private insurance companies from the offshore marine energy (Oil and Gas) market at least on the USA territory.<sup>82</sup>

### **3.6 Current situation of the BP insurance coverage claims or the self insurance v. Traditional insurance Battle<sup>83</sup>**

The first question arising is which type of coverage was supposed to be placed, and which company was supposed to acquire the coverage. The fact is that BP was self insured through its captive company, therefore in order to reduce their lost the – Insurance battle- Began. Just one month after the blow out Transocean's excess insurers filed a Declaratory Judgment action in order to establish their legal obligations towards British Petroleum. The diverse underwriters argue that they did not agree on covering pollution originated from the well. At the same time Lloyd's of London filed a complaint for declaratory relief in The southern District of Houston Texas seeking the declaration of diverse excess policy underwriters of Transocean not liable, due to no 'additional insurance protection granted to BP in any of the policies contracted by Transocean.

In a third document, 'Certain Underwriters at Lloyd's London v. BP P.L.C' the syndicates request the USA court to declare 'no additional insurance Obligation to BP' ( Lloyd's claim that the additional insurance coverage does not extent to cover BP, as, the drilling terms in the contract between BP and Transocean do not extent to subsurface releases. The Lloyd's syndicates claim that British Petroleum contract to lease the Deep Horizon from Transocean, specifies that it's insurers would only be held liable for

---

<sup>82</sup> Admiralty and Maritime Law Commite Special Edition  
[http://www.duncour.com/PDF/2010AdmiraltySpecialEdition\\_LBroussard.pdf](http://www.duncour.com/PDF/2010AdmiraltySpecialEdition_LBroussard.pdf)

<sup>83</sup> Certain underwriters at Lloyds of London and various insurance companies versus BP et al. civil action admiralty rule 9 filed in TXSD on 05/21/10 case 4:10-cv-01823 controversy regarding coverage of BP as additional insured.

physical damage to the rig and not for pollution caused by a leak from the well or the rig. Catlin, one of the insurance companies involved in the legal actions, and possibly the one economically more affected, comments that this oil spill will be economically the worst loss in the Marine Energy Market after the explosion of the Piper Alpha platform in 1988. The Piper Alpha losses cost Lloyd's £8 billion between 1988 and 1992<sup>84</sup>

---

<sup>84</sup>[http://business.timesonline.co.uk/tol/business/industry\\_sectors/banking\\_and\\_finance/article7136623.ece](http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article7136623.ece)

## 4. Conclusion

At the end, the offshore drilling becomes every day a more complex industry, and as was previously stated by the Columbia space shuttle Accident Investigation Board, *“Complex systems almost always fail in complex ways and we believe it would be wrong to reduce the complexities and weaknesses associated with these systems to some simple explanation. Too often, accident investigations blame a failure only on the last step in a complex process, when a more comprehensive understanding of that process could reveal that earlier steps might be equally or even more culpable. In this Board's opinion, unless the technical, organizational, and cultural recommendations made in this report are implemented, little will have been accomplished to lessen the chance that another accident will follow.”*<sup>85</sup> This statement, despite referring to technical failure in a space mission, can be also applied to the Marine energy Insurance and the offshore drilling legislations, which despite being reviewed and reformed in regular basis; failures will most likely only be noticed after accident happen.

Accidents happen because regulations are not effective.

As it has been explained and analyzed, at least in theory, the requisition of compulsory so called ‘private, commercial or traditional’ insurance in order to be able to operate a drilling facility might be an encouragement to provide, implement and follow safety measurements that in numbers will induce to a less expensive investment that the liability the companies can incur if said measurements are not taken.

Being a company compelled to the payment of periodical premiums that will be increased according to the risk, the oil companies are more likely to understand economically the cost of not reducing the risk, it has been evident by the communications of the Macondo how many times they proceed with faulty operations ‘*hoping all went well*’ and ‘*that all resulted ok*’ The Macondo should have not happened if safety protocols have been followed strictly.

A company that self insures may have issues screening and justifying extra expenses in order to guarantee their safety operation, especially because all the risk assessments are done through internal calculations of probable liabilities.

---

<sup>85</sup> <http://spaceflightnow.com/columbia/report/006boardstatement.html>

Insurance companies tend to low or raise the insurance premium depending of the risk assessment which among other things implies the safety measures taken by the companies, having a lower premium might be an incentive to implement new safety techniques. Also, as the liabilities will be borne by the insurance companies, it is likely that the same will seek ways to reduce claims, for example with the investment on research for the implementation of best practices.

Offshore drilling insurance requirements in the USA should be revised and updated, although politically speaking, seems there is no much opening to accept regulations like the ones enacted in countries like Norway and the UK, therefore, it is my opinion, that a possible solution for this enquire would be, instead raising the increased liability and oil spill financial responsibility as per the OPA and BOEMRE respectively proposed by the congress, it is necessary to enforce an independent third party supervision to the companies that self insure. That is to say, to include some sort of Marine Survey Warranty forcing the well licensee (operator) to hire a government approved marine surveyor to review their operations. This warranty has proven to be successful for the insurance companies in order to control and supervise their Insured parties, therefore may be a financially reduced cost to guaranty safety operations on the self insured companies.

Another solution (still under trial) might be the implementation of Quality and Safety managers, who will be on charge of ensuring that all the ‘on paper’ safety manuals are actually complied and followed. Most of the time, the safety manuals do exist but they are not implemented as they are intended. This has been recently put into practice by companies like Aker Solutions ASA.<sup>86</sup>

All the above mentioned could force the companies to take more precautions during their drilling operations, *‘precautions they currently do not take’*<sup>87</sup>

As stated previously, the ‘safety based’ approach on the drilling regulations as has been adopted by Norway and united Kingdom were the drilling solutions are set by the companies and not by the regulations and were operators are free to use their own solutions as long as they can prove they reach the performance requirements, have

---

<sup>86</sup>Informal conversation with Miss. Nancy Flores-Cuautle. -New hired- Quality and Health, Safety and Environment Coordinator for Aker Solutions ASA.

<sup>87</sup> National commission on the BP Deepwater Horizon oil Spill and Offshore drilling Response Draft. (working papper No. 7). Offshore Energy Insurance Brokers Statement.



proven to be successful, <sup>88</sup>there is no doubt that Norway has developed the most functional spill clean-up technology. Although it's also been said that -there is no convincing evidence that said technology development is due to the Norwegian 'safety case' approach.-

It is yet very early to know the legislative outcome of the Macondo blow out, we know that after every big accident a new regulation comes into place, we have for example the 'structural redundancy and risk acceptance criteria' as a consequence of the Alexander Kielland, the 'safety case' risk management approach as a result of the Piper Alpha, the Exxon Valdez brought the 'double hull' tankers and 'increased safety for process industry' after the Texas city. Only time will be able to show the result of the Macondo. It's only a matter of waiting to see what conditions are adopted by the governments mainly in the USA and Europe, nonetheless it is important to remember that the real conclusion of this and the efficiency of the same will only be able to be appreciated after the – we hope it does not happen- next major casualty, which possible scenario might be the Arctic waters.

No single regulation will be able to prevent or minimize offshore accidents, it's necessary to make a cultural change on the core of the oil companies ideology. Nonetheless, a proper regulation can encourage the companies to make those changes by restricting or removing their right to drill.

---

<sup>88</sup> There are several organizations in Norway committed to develop this technology, among others the Norwegian Oil Spill Control Association.

## **Bibliography.**

Oil Pollution Act 1996

Ley mexicana sobre el contrato de seguro, reglamento a la ley sobre el contrato de seguro, código mercantil de los Estados Unidos Mexicanos.) 2011

Howard Bennett *Law of Marine Insurance*, Edition Second Oxford University Press ISBN13: 9780199273591- ISBN10: 0199273596

Professor Malcolm A Clarke with Julian M. Burling, Robert L. Purves, *Law of Insurance Contracts*, 6th Edition 2009, ISBN 978-1-84311-843-5 ed. Informa

R. Colinaux, *The Law of Insurance*, 4th ed. London: Sweet & Maxwell, 1979)ed. Thomson Reuters. ISBN 9780414042339

John Hanson, *Insurance Disputes*, Second Edition 2003 LLP Limited ISBN 18433112469

*Insurance Law: Doctrines and Principles* Second Edition ISBN-13: 9781841135403 isbn-10: 1841135402 oxford and Portland, Oregon 2005.

Nicholas Legh-Jones, QC; Professor John Birds; David Owen, *Macgillivray on insurance law*, ISBN: 9780414042469 Sweet & Maxwell 2011

Sharp, David. *Upstream and Offshore Energy Insurance*. Livingston Witherbys 2009

Sharp, David W. *Offshore Oil and Gas Insurance*. London, Witherby & Co Ltd 1994

Summerskill, Michael. *Oil Rigs: Law and Insurance*. London, Stevens & Sons 1979

Guy carpenter *Reinsurance law* fourth editon rl carter, ld lucas, n Ralph ed. Reactions.isbn 185564 7923

Baris Soyer. *Warranties in marine insurance* second edition CAVENDISH Edited by David Dezhi Peng. *Insurance and Legal Issues in the Oil Industry* London Graham & Trotman Ltd. 1993

## **Websites:**

[http://ccrm.berkeley.edu/pdfs\\_papers/bea\\_pdfs/DHSGFinalReport-March2011-tag.pdf](http://ccrm.berkeley.edu/pdfs_papers/bea_pdfs/DHSGFinalReport-March2011-tag.pdf)

<https://maritimejournal.murdoch.edu.au/index.php/maritimejournal/article/viewFile/88/151>

<http://www.gard.no/ikbViewer/Content/67658/MOU%20pandi.pdf>

<http://www.drillingahead.com/page/macondo-incidentfindings-and>

<http://www.isopec.org/publications/journals/ijope-02-1/abst-2-1-p018-MI-6A-Irani.pdf>

<http://www.indiastudychannel.com/resources/94559-Offshore-Structures.aspx>

<http://www.uneptie.org/energy/activities/frm/pdf/Lesson3-UnderwritingGuidelines.pdf>

<http://www.resource4admiraltylaw.com/topics/shippingvesselaccidents.html>

[http://www.regjeringen.no/pages/2061386/PDFS/NOU200820080008000EN\\_PDFS.pdf](http://www.regjeringen.no/pages/2061386/PDFS/NOU200820080008000EN_PDFS.pdf)

[http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed\\_raastof/2011/08/~/\\_media/981EC2BD18474A028F11DEF6A20B0D31.ashx](http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed_raastof/2011/08/~/_media/981EC2BD18474A028F11DEF6A20B0D31.ashx)

[http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed\\_raastof/2011/08/~/\\_media/981EC2BD18474A028F11DEF6A20B0D31.ashx](http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed_raastof/2011/08/~/_media/981EC2BD18474A028F11DEF6A20B0D31.ashx)

[http://www.eapdlaw.com/files/upload/the\\_bp\\_disaster.pdf](http://www.eapdlaw.com/files/upload/the_bp_disaster.pdf)

<http://insight.milliman.com/article.php?cntid=7272>

<http://www.iii.org/presentations/the-deepwater-horizon-disaster-insurance-market-impacts.htm>

<http://www.iii.org/presentations/iii-testifies-on-the-liability-and-financial-responsibility-for-oil-spills-under-the-oil-pollution-act-of-1990-and-related-statutes.html>

[http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed\\_raastof/2011/08/~/\\_media/981EC2BD18474A028F11DEF6A20B0D31.ashx](http://dk.nanoq.gl/Emner/Landsstyre/Departementer/R%C3%A5stofdirektoratet/Nyheder%20fra%20direktoratet/Nyhed_raastof/2011/08/~/_media/981EC2BD18474A028F11DEF6A20B0D31.ashx)

<http://www.npr.org/player/v2/mediaPlayer.html?action=1&t=1&islist=false&id=135574677&m=135576616>

<http://www.npr.org/2011/04/20/135574677/many-gulf-residents-still-waiting-on-bp-fund-relief>

<http://articles.latimes.com/2010/jun/14/nation/la-na-oil-inspection-20100615>

<http://coastalcare.org/2011/04/drill-off-alaska-coast-shortcomings-in-oil-spill-preparedness-renews-debate/>

<http://www.codanmarine.com/codanmarine/Page18236.html>

<http://www.offshoreinjuries.com/CM/Custom/transocean-deepwater-horizon-oil-rig-explosion.shtml>

[http://www.duncour.com/PDF2/2010AdmiraltySpecialEdition\\_LBroussard.pdf](http://www.duncour.com/PDF2/2010AdmiraltySpecialEdition_LBroussard.pdf)

[http://business.timesonline.co.uk/tol/business/industry\\_sectors/banking\\_and\\_finance/article7136623.ece](http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article7136623.ece)

<http://spaceflightnow.com/columbia/report/006boardstatement.html>

[http://www.duncour.com/PDF/2010AdmiraltySpecialEdition\\_LBroussard.pdf](http://www.duncour.com/PDF/2010AdmiraltySpecialEdition_LBroussard.pdf)

